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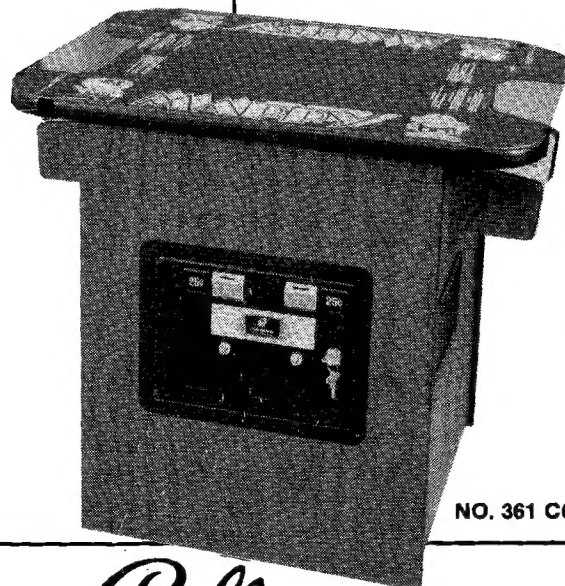
April 1983
Game Nos. 353 & 361



Parts and Operating Manual



NO. 353 UPRIGHT



NO. 361 COCKTAIL

Bally

MIDWAY MFG. CO.

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WARNING

**THIS GAME MUST BE GROUNDED. FAILURE TO DO SO MAY
RESULT IN DESTRUCTION TO ELECTRONIC COMPONENTS.**

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a CLASS A computing device pursuant to SUBPART J of PART 15 of FCC RULES, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

ELECTRICAL BULLETIN: FOR ALL APPARATUS COVERED BY THE CANADIAN STANDARDS ASSOCIATION (CSA) STANDARD C22.2 NO. 1, WHICH EMPLOYS A SUPPLY CORD TERMINATED WITH A POLARIZED 2-PRONG ATTACHMENT PLUG.

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***Bally*/MIDWAY**
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MAPPY

I. Game Operation

MAPPY is a one or a two player game with a color T.V. monitor. The game gives a display which has all the parts shown on Page 1-7.

SELF-TEST MODE

The Self-Test mode is a special mode for checking the game switches and computer functions. It is the easiest and best way to check for proper operation of the entire game.

The game has five possible modes of operations: ATTRACT, READY-TO-PLAY, PLAY, HIGH SCORE/INITIAL, and SELF-TEST.

NOTE: Putting the game into Self-Test will cause it to erase any CREDITS it has on it from its memory.

You may begin a Self-Test at any time after the power to the game is on by sliding the Self-Test switch to the "ON" position. Now that the game is in the Self-Test mode, it will react as follows:

1. First, you will see several moving multicolored patterns appear on the screen.
2. Immediately following this, a right side up test display is shown on the monitor screen. The game will remain in this Self-Test mode until you set the Self-Test switch back to the "OFF" position. These test displays are shown below.

SELF-TEST DISPLAY AND BOARD LOCATION COORDINATES

SCROLL 00 THROUGH FB (COUNTS IN HEXIDECIMAL - CONTROLLER HELD TO RIGHT FIRST)
RAM OK or (a number i.e. 5, 7, etc.)
ROM OK or (a number i.e. 1, 4, etc.)
I/O OK or (a number i.e. 1, 2, etc.)
UPRIGHT - or - COCKTAIL
1 COIN 1 CREDIT
1 COIN 1 CREDIT
RANK A, B, C, D (DIFFICULTY LEVEL - A = EASIEST SETTING)
MAPPY 3 (OPERATOR SELECTABLE)
SOUND 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23
ATS ON
RND OFF (THIS IS A RACK ADVANCE MODE)
1st BONUS FOR 20000 PTS. (OPERATOR SELECTABLE)
2nd BONUS FOR 70000 PTS. (OPERATOR SELECTABLE)

3. If a bad ROM or RAM chip is found by the games internal check system during the Self-Test, the game indicates this to you by showing the location code of the bad chip(s) on the SCREEN. The following table translates the chip location codes into actual positions on the games P.C. Boards.

RAM TEST INDICATIONS AND THEIR MEANINGS

INDICATION	MEANING	CHIP LOCATION
RAM OK	NO RAM IS OUT OF ORDER	
RAM 1	RAM 1 on VIDEO PCB is no good	2H
RAM 2	RAM 2 on VIDEO PCB is no good	2J
RAM 3	RAM 3 on VIDEO PCB is no good	2N
RAM 4	RAM 4 on VIDEO PCB is no good	2L
RAM 5	RAM 5 on VIDEO PCB is no good	2M
RAM 6	RAM 6 on C P U PCB is no good	3K or 3L
RAM 7	RAM 7 on C P U PCB is no good	2D

ROM TEST INDICATIONS AND THEIR MEANINGS

INDICATION	MEANING	CHIP LOCATION
ROM OK	NO ROM IS OUT OF ORDER	
ROM 1	ROM 1 on CPU PCB is no good	1D
ROM 2	ROM 2 on CPU PCB is no good	1C
ROM 3	ROM 3 on CPU PCB is no good	1B
ROM 4	ROM 4 on CPU PCB is no good	1K

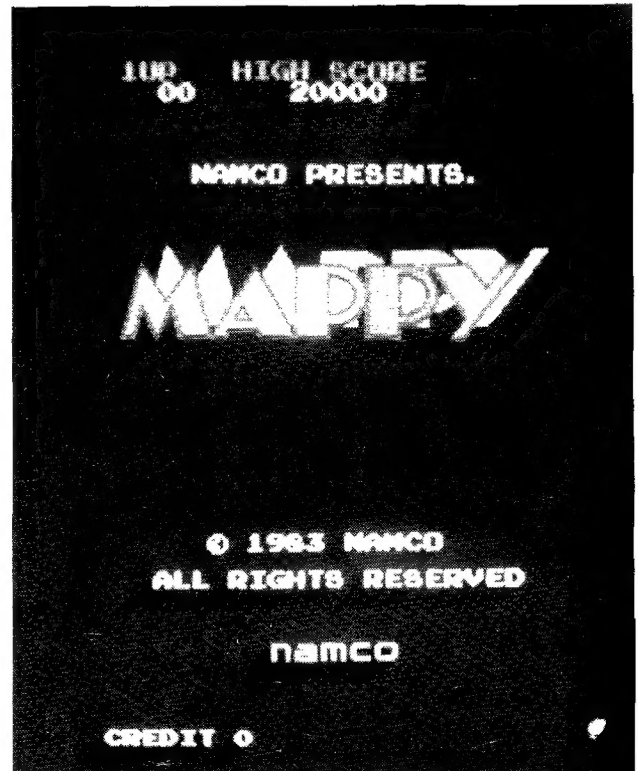
I/O TEST INDICATIONS AND THEIR MEANINGS

INDICATION	MEANING	CHIP LOCATION
I/O OK	NO BIT IS OUT OF ORDER	
I/O 1	BIT C P U 1 is out of order	4F
I/O 2	BIT C P U 2 is out of order	4C

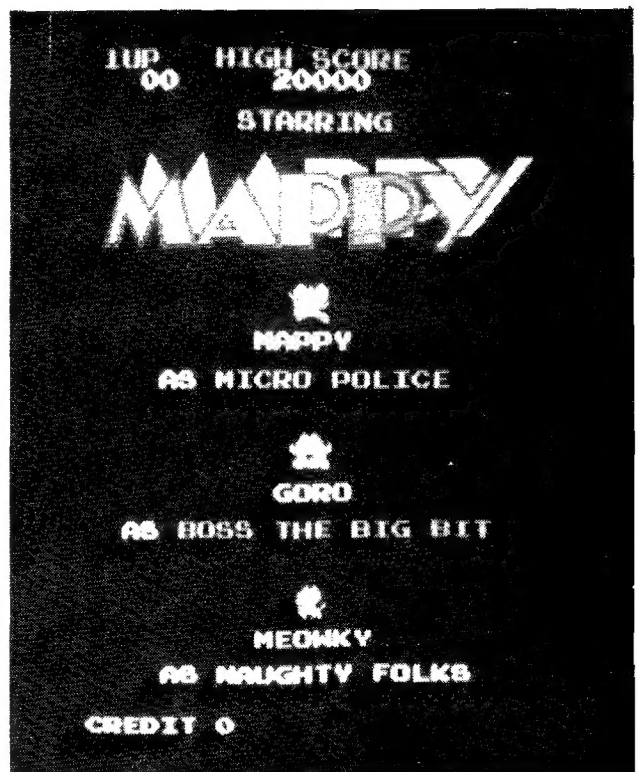
4. "RANK" is a difficulty setting with "RANK A" being the **least** difficult level of play and "RANK D" being the **most** difficult level of play. See the "OPTION SWITCH SETTINGS" table.
5. To check "SOUND" (the game has 23 different sounds):
 - a) Move the controller to the right momentarily and release it - "SOUND" number changes from "00" to "01" and you hear sound "01".
 - b) Press any button or activate the coin switches and sound "01" will change to sound "02" and it is heard.
 - c) Repeat Step 2 with a different button or switch, etc. and - "SOUND 02" changes to "SOUND 03" and it is heard - and so on.
6. To check your game function switches and buttons (coin counter switches, door opening button, 1 PLAYER and 2 PLAYER buttons): activate each one while the game is in the Self-Test mode. You should hear a different game sound for each activation. If you do not hear it, the switch/button is either not working, miswired, or disconnected. Check it out thoroughly.
7. If you wish to produce **only** a CROSS HATCH test pattern on the monitor screen for further use, slide the Self-Test switch to the "ON" position and hold PLAYER 1's controller to the right (WILL NOT WORK WITH PLAYER 2'S CONTROLLER). The CROSS HATCH pattern will scroll on to the screen.
8. When finished with the Self-Test mode, slide the Self-Test switch back to the "OFF" position.
9. Normal game functions will now return to the monitor screen.

ATTRACT MODE

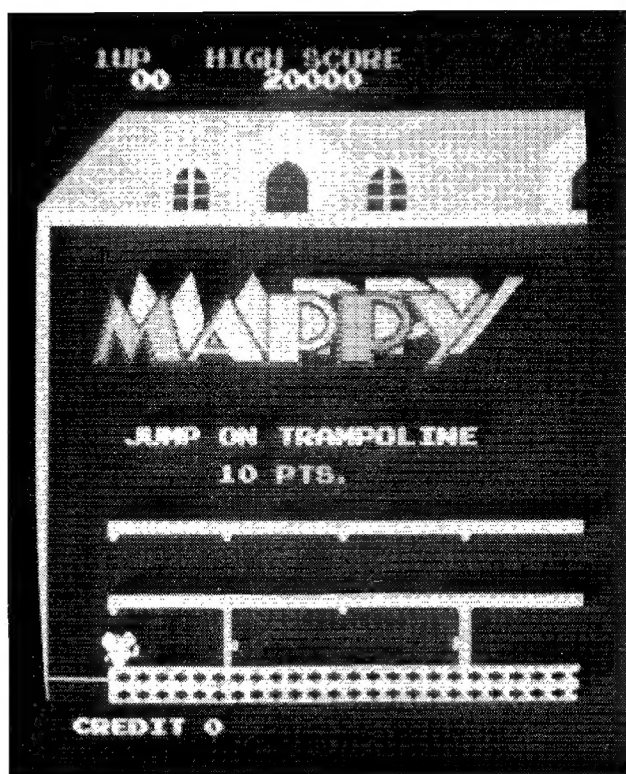
1. The Attract mode starts:
 - ☐ Just after power has been turned on to the game. (Self-Test switch is in the "OFF" position.)
 - ☐ After a Self-Test has been completed. (Performing a Self-Test sets the credits in the games memory to zero "0".)
 - ☐ After a play has been finished, the score was not high enough to put the game into the High Score/Initial mode, and there are no more credits left in the games memory.
 - ☐ After the High Score/Initial mode when there are no more credits left in its memory.
 - ☐ In the Attract mode, the game will give the following displays **centered** on the monitor screen:



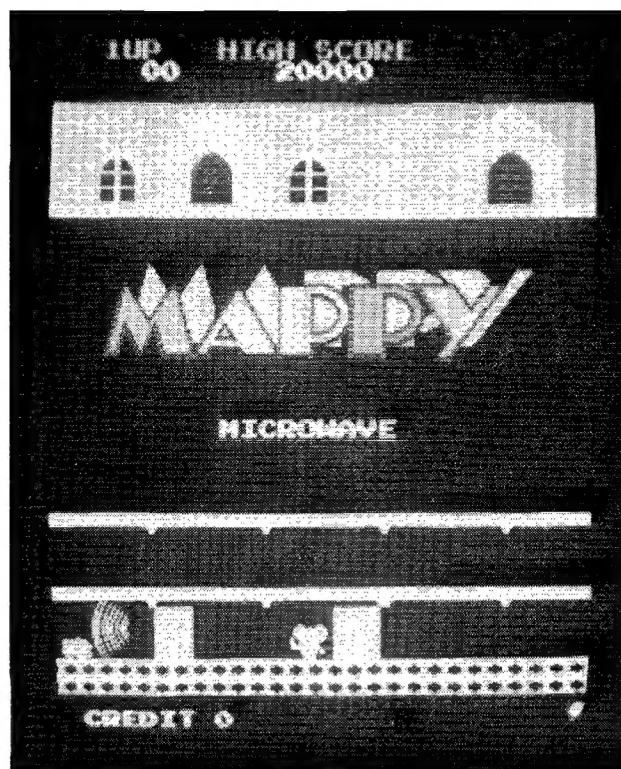
Attract Mode Display 1



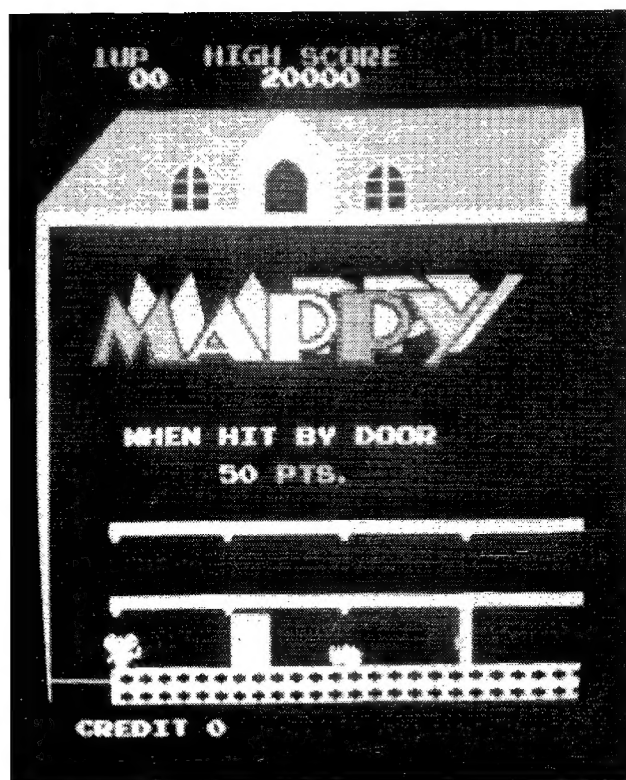
Attract Mode Display 2



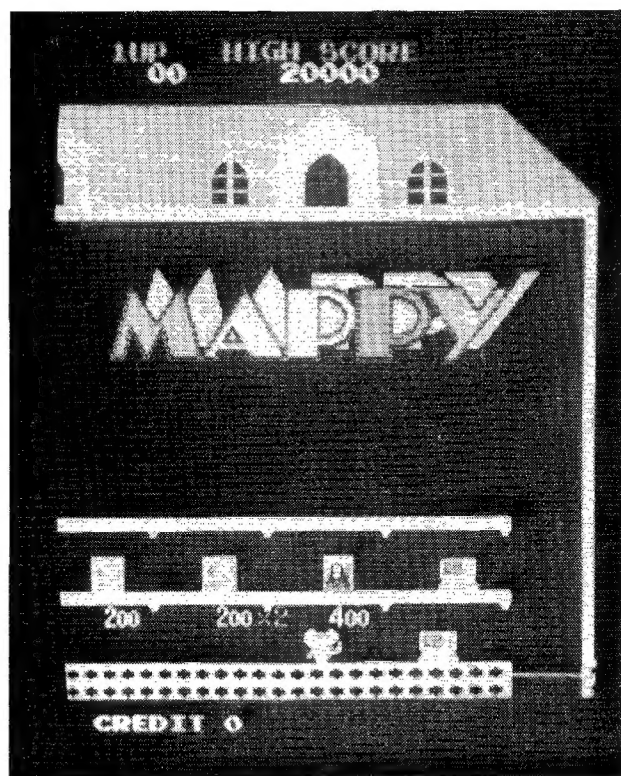
Attract Mode Display 3



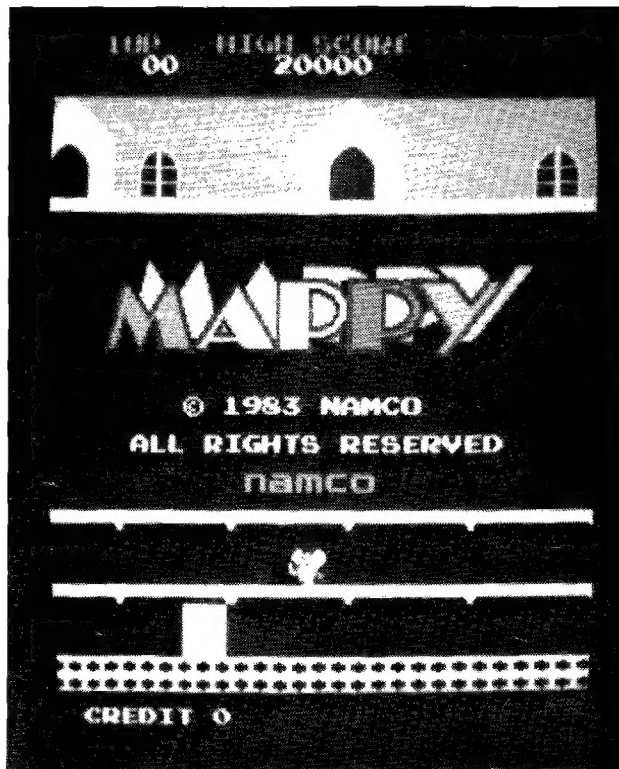
Attract Mode Display 5



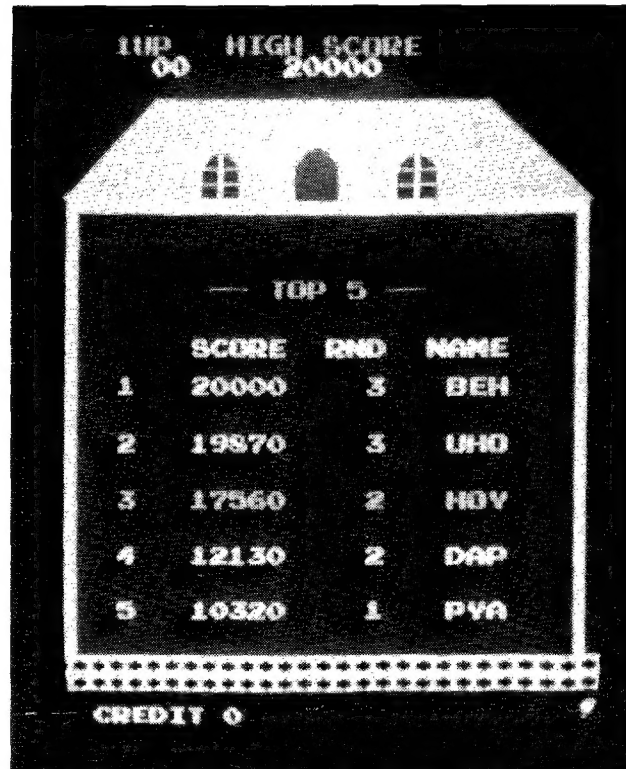
Attract Mode Display 4



Attract Mode Display 6

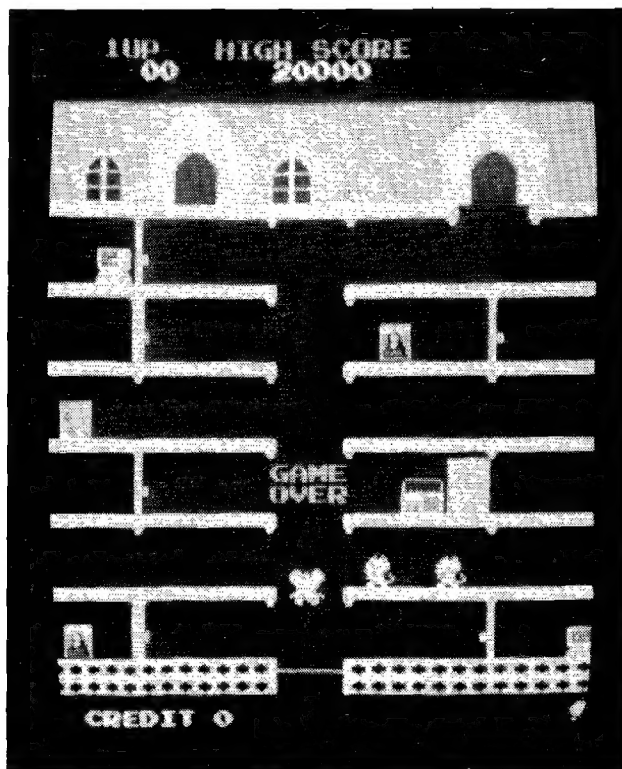


Attract Mode Display 7

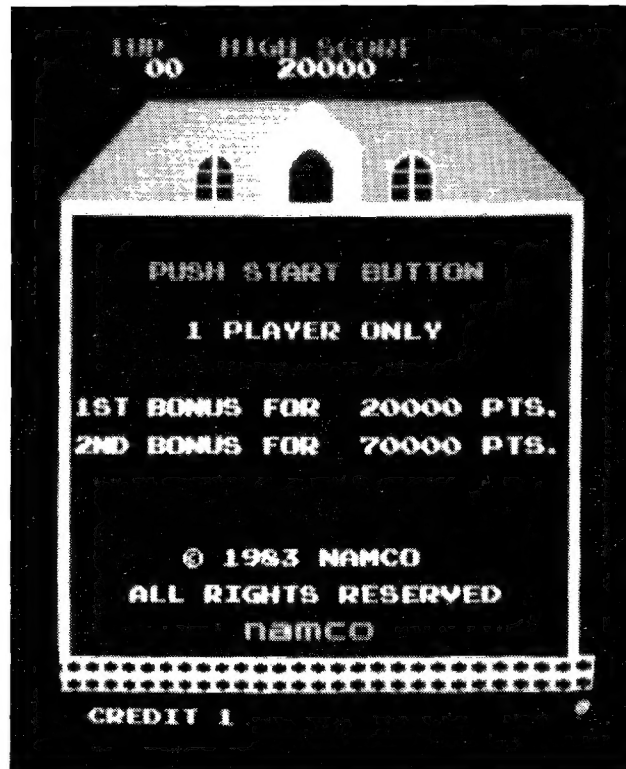


Attract Mode Display 9

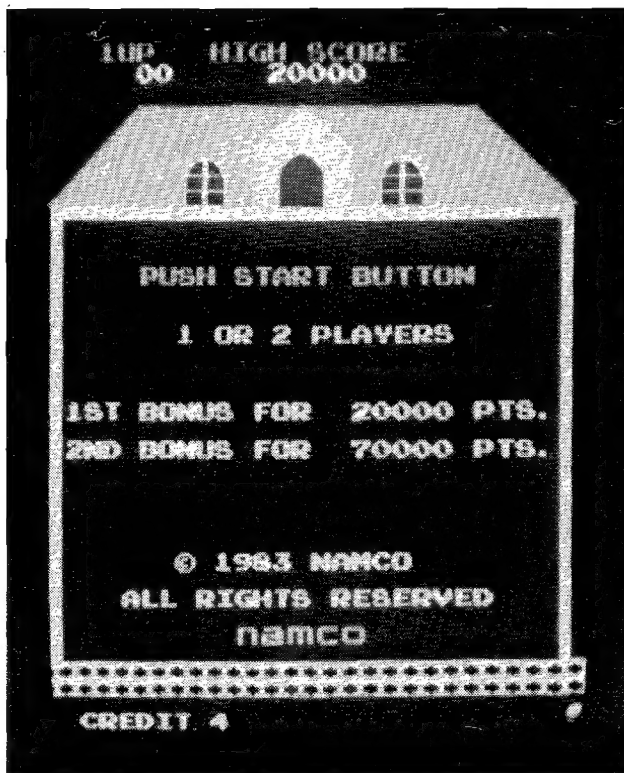
- No matter where the game is in the Attract mode sequence, it will immediately go to the following display as soon as a game has been paid for.



Attract Mode Display 8



Ready-To-Play Mode Display 1



Ready-To-Play Mode Display 2

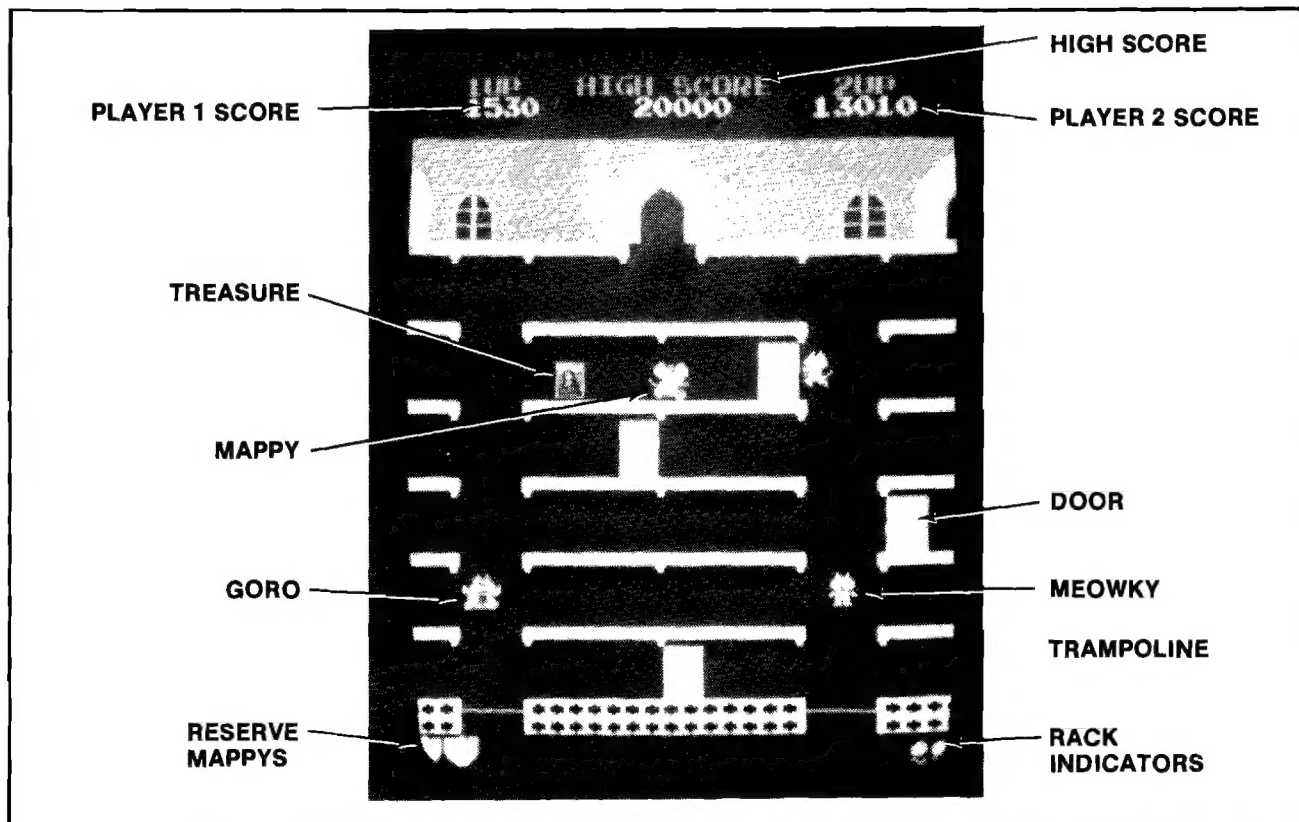
READY-TO-PLAY MODE

1. The Ready-To-Play mode starts when enough coins have been accepted for a 1 or a 2 player game.
2. The Ready-To-Play mode ends when either the "1 PLAYER" or the "2 PLAYER" push button is pressed.
3. In the Ready-To-Play mode, the game will give the above displays **centered** on the monitor screen.
4. If no START button is pressed, the displays will remain indefinitely as shown above.

PLAY MODE

1. The Play mode begins when either the "1 PLAYER" or the "2 PLAYER" start button is pressed. "PLAYER ____ READY" is displayed **centered** on the screen.
2. The Play mode ends when all of your MICE have been caught. When this happens, "GAME OVER" is written across the center of the monitor screen.

3. When playing this game, you are the MOUSE'S controlling force. It is up to you to direct him through the maze of floors and doors to gather his treasures. Your job is to develop CAT avoidance strategies to keep him away from his pursuers (the CATS), and to give him guidance while gathering his treasures.
4. These pursuers are very sneaky and, if given half a chance, will try to corner your MOUSE at the end of one of the platforms or to trap him on one of the floors he must use to get to the treasures he's after.
5. The MOUSE'S pursuers have no defense mechanisms of any kind. But they CANNOT be PERMANENTLY eliminated either. As soon as your MOUSE puts one pursuer out of commission, another appears somewhere else on the screen.
6. However, in an emergency, your MOUSE can slow one pursuer down for short periods of time. This is accomplished by having him throw open a standard door in his pursuers face to knock him down and stun him. When hit by the door, his pursuer will be stunned for several seconds. When he is disabled like this, the MOUSE can walk right by him and not be caught. To temporarily eliminate more than one pursuer at a time, you must catch them in the radar waves emitted when opening the thick flashing doors.
7. As your skill level increases, the number and direction of pursuers coming at your MOUSE at any one time and the speed with which they move, is gradually increased; plus, their pursuit patterns become more and more devious while their overall accuracy is highly improved.
8. Bonus MICE are awarded to you periodically throughout the game as you reach or pass certain preselected point values. (These may be varied by the Owner/Operator.)
9. A Bonus Rack is awarded to you as your 3rd Rack and every 4th Rack thereafter i.e. in the 7th, 11th, 15th, 19th, etc. Racks.
10. When your MOUSE completes a Rack, the screen is cleared, the number of the next Rack is displayed in the center of the screen, the next Rack maze appears on the screen, your MOUSE appears at the bottom right hand corner of the screen, and play begins anew.
11. When the pursuers happen to catch one of your MICE, assuming you have a least one remaining in reserve, play stops, the screen is cleared, and the words "PLAYER ____ READY" "ROUND ____" appear **centered** on the monitor screen BEFORE play begins again.



Display of "On-Screen" Graphics During Game Play High Score/Initial Mode Display

12. When the pursuers catch your **last** MOUSE, the words "GAME OVER" are displayed **centered** on the monitor screen. (AT THIS POINT, SEVERAL DIFFERENT THINGS CAN HAPPEN.)

If your score was one of the Top 5, the game will go directly to the High Score/Initial mode presentation. If your score is not high enough to cause the game to go into the High Score/Initial mode, it will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

HIGH SCORE/INITIAL MODE

In the High Score/Initial mode the game gives a display which looks like that shown at right.

When in the High Score/Initial mode, there are three "DOTS" opposite your score in the area where your initials should be.

By moving the controller stick to the right, the letters of the alphabet will appear in the place where your first initial will go and will sequence forward through it: "A", "B", "C", "D", etc. By moving the controller stick to the left, the letters can be made to sequence backward through the alphabet: "Z", "Y", "X", "W", etc.



High Score/Initial Mode Display

When you reach your initial, release the controller and push the DOOR button. Your initial is frozen in place. If you do not wish to put your initials opposite your score, just press the DOOR button three times. Three "DOTS" will appear opposite your score.

After the High Score/Initial mode, the game will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

Most of the above holds true in the "2 PLAYER" mode also. But there are a few minor differences.

TWO PLAYER OPERATION

The Upright and Cocktail Table models both have two player operation.

In the two player mode, the rules of play are the same as in the single player mode. There are some additional rules, however.

1. In the Upright models, the players must take turns at the controls.
2. In the Cocktail Table model, each player has his own set of individual controls. The picture will flip to face you when it is your turn. (When it is not your turn, your set of controls will have NO effect on the game.)
3. Your turn lasts until the pursuers catch your MOUSE. At this point, the game will do one of several things depending on whether or not the caught MOUSE was your last or if you still have others remaining in reserve.

MOUSE CAUGHT - OTHERS REMAINING IN RESERVE

- ☐ The GAME stops.
- ☐ Next, the Rack changes to the Rack number the other player is in, it displays "PLAYER ____" - "GAME START" while what's left of the other players Rack and his MOUSE appears on the screen.
- ☐ Play then begins for the other player.

MOUSE CAUGHT - NO OTHERS REMAINING IN RESERVE

- ☐ Game displays "PLAYER ____" - "GAME OVER".
- ☐ Next, if your score was one of the five best scores, the game will go into the High Score/Initial mode immediately.

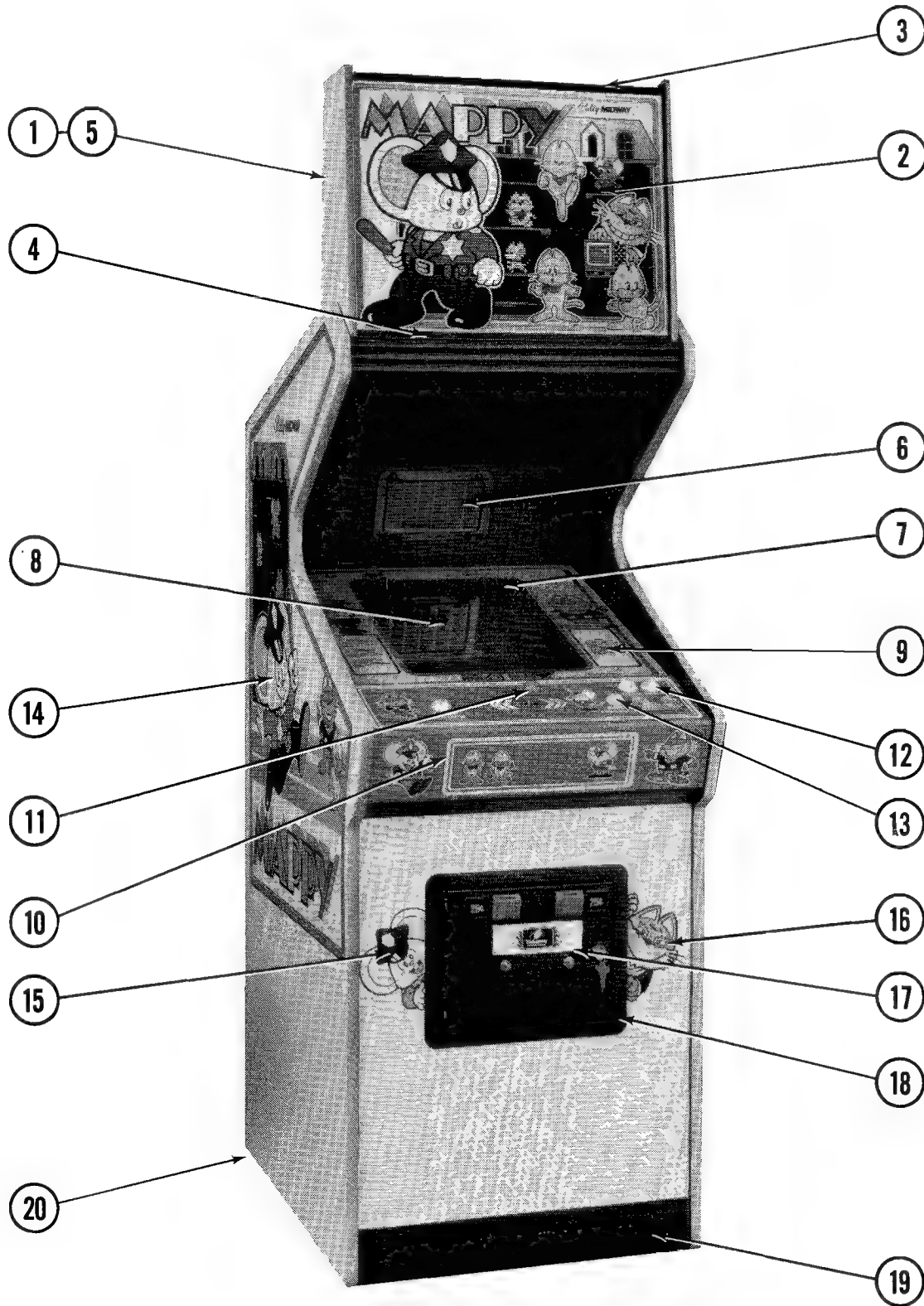
- ☐ After this, the Rack changes to the Rack number the other player is in, the game will display "PLAYER ____ READY" while what's left of the other players maze and his MOUSE appear on the monitor screen. Game play then begins for the other player.
- ☐ If your score was not high enough to cause the game to go into the High Score/Initial mode, the game will display "PLAYER ____ READY" while what's left of the other players maze and his MOUSE appear on the monitor screen. Game play then begins for the other player.
- ☐ After the last player has finished his game, if his score was one of the five best scores, the game will go into the High Score/Initial mode immediately.
- ☐ If his score was NOT high enough to cause the game to go into the "High Score/Initial" mode, the game will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

MAPPY								
OPTION SWITCH SETTINGS								
DIP SWITCH A (5B)								
DIFFICULTY LEVEL SETTINGS — "A" IS THE EASIEST AND "D" IS THE MOST DIFFICULT								
DIFFICULTY LEVEL*	"A" EASY	SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7 SW#8
	"B"	OFF	OFF	NOT	NOT	NOT		
	"C"	ON	OFF	USED	USED	USED		
	"D" MOST DIFFICULT	OFF	ON	MUST	MUST	MUST		
		ON	ON	BE	BE	BE		
				OFF!	OFF!	OFF!		
GAME SOUNDS								
* GAME PROVIDES SOUND IN ATTRACT MODE GAME DOES NOT PROVIDE SOUND IN ATTRACT MODE		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7 SW#8
				NOT	NOT	NOT	OFF	
				USED	USED	USED	ON	
				MUST	MUST	MUST		
				BE	BE	BE		
				OFF!	OFF!	OFF!		
ROUND CHANGE								
* NORMAL OPERATION RACK ADVANCE		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7 SW#8
				NOT	NOT	NOT	OFF	
				USED	USED	USED	ON	
				MUST	MUST	MUST		
				BE	BE	BE		
				OFF!	OFF!	OFF!		
FREEZE VIDEO								
* MONITOR OPERATES NORMALLY FREEZE VIDEO (MONITOR PRESENTATION STOPS MOVING)		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7 SW#8
				NOT	NOT	NOT		OFF
				USED	USED	USED		ON
				MUST	MUST	MUST		
				BE	BE	BE		
				OFF!	OFF!	OFF!		
* INDICATED FACTORY RECOMMENDED SETTINGS FOR THESE SWITCHES						PART NO. M051-00353-A007		

MAPPY									
OPTION SWITCH SETTINGS									
DIP SWITCH B (5E)									
COINS PER CREDIT — COIN SWITCH NUMBER 1									
* 1 COIN	1 CREDIT	SW#1	SW#2	SW#3	SW#4	SW#5	SW#6	SW#7	SW#8
1 COIN	2 CREDITS	OFF	OFF	OFF					
1 COIN	3 CREDITS	ON	OFF	OFF					
1 COIN	6 CREDITS	OFF	ON	OFF					
2 COINS	1 CREDIT	ON	ON	OFF					
2 COINS	3 CREDITS	OFF	OFF	ON					
3 COINS	1 CREDIT	ON	OFF	ON					
3 COINS	2 CREDITS	OFF	ON	ON					
		ON	ON	ON					
BONUS SHIPS AWARDED AT THE FOLLOWING POINT VALUES:									
BEGAN WITH 1, 2 OR 3 MAPPY'S		BEGAN WITH 5 MAPPY'S		SW#1	SW#2	SW#3	SW#4	SW#5	SW#6 SW#7 SW#8
1st MAPPY	20000	*ONE MAPPY	30000						
2nd MAPPY	70000	2nd MAPPY	80000				OFF	OFF	OFF
1st MAPPY	20000	1st MAPPY	30000						
2nd MAPPY	60000	2nd MAPPY	100000				ON	OFF	OFF
1st MAPPY	20000	1st MAPPY	30000						
2nd MAPPY	80000	2nd MAPPY	120000				OFF	ON	OFF
1st MAPPY	30000	1st MAPPY	30000						
2nd MAPPY	100000	ONLY					ON	ON	OFF
1st MAPPY	20000	1st MAPPY	40000						
ONLY		ONLY					OFF	OFF	ON
1st MAPPY	20000	1st MAPPY	30000						
and EVERY	70000	and EVERY	100000				ON	OFF	ON
1st MAPPY	20000	1st MAPPY	40000						
and EVERY	80000	and EVERY	120000				OFF	ON	ON
NO BONUS MAPPY'S GIVEN WITH THIS SETTING							ON	ON	ON
DETERMINES NUMBER OF SPACE FIGHTERS PLAYER BEGINS GAME WITH:									
* 3 MAPPY'S								OFF	OFF
5 MAPPY'S								ON	OFF
1 MAPPY								OFF	ON
2 MAPPY'S								ON	ON
*INDICATED FACTORY RECOMMENDED SETTINGS FOR THESE SWITCHES						PART NO. M051-00353-A007			

II. Illustrated Parts Breakdown

NO. 353 - MAPPY - UPRIGHT - FRONT

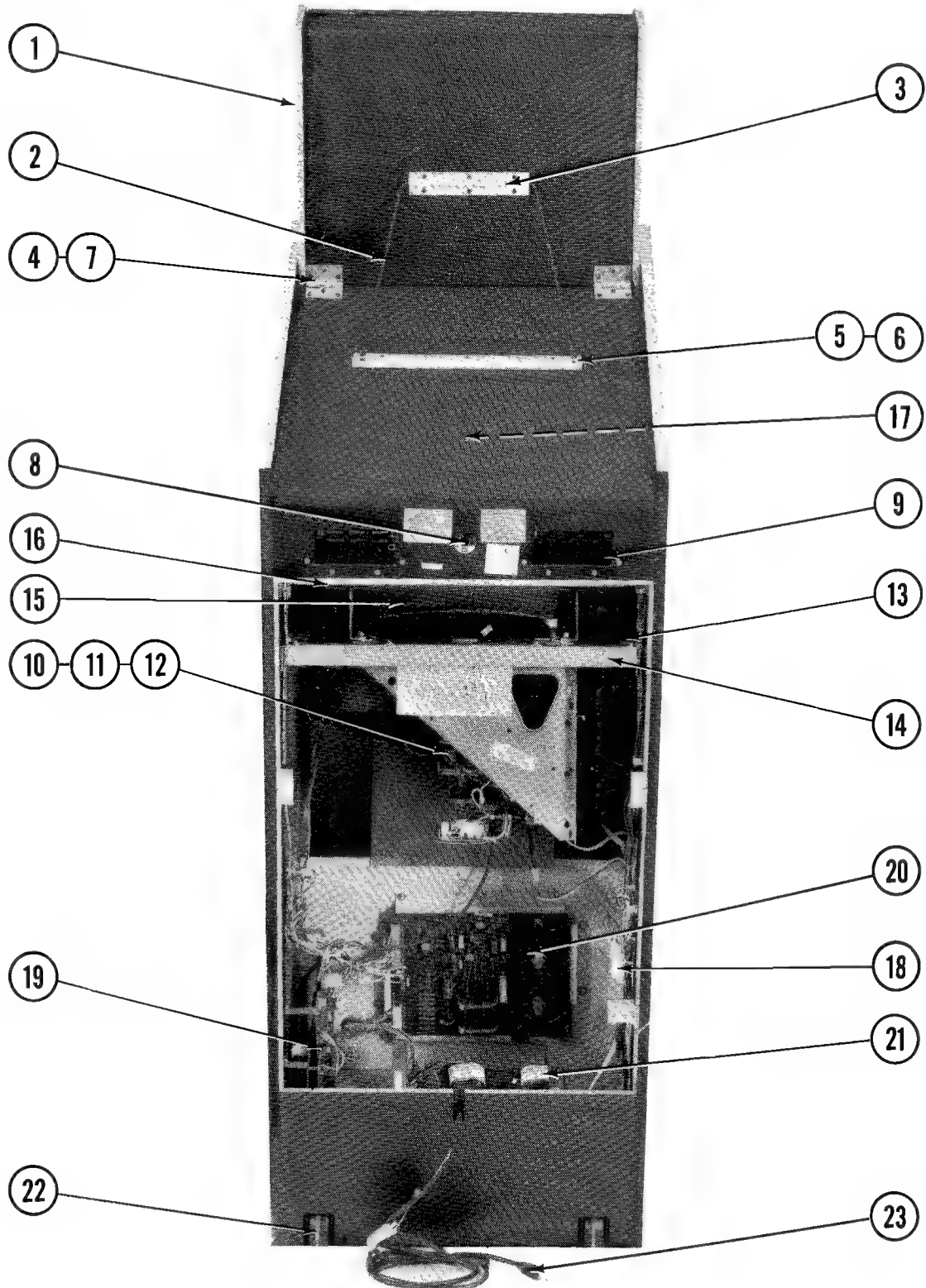


NO. 353 - MAPPY - UPRIGHT - FRONT - PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	A353-00011-0000	HEADER ASSY.
2	0353-00901-00XF	HEADER - 17-7/16"x21 1/8"
3	0353-00103-00XF	HEADER RETAINER - UPPER
4	A353-00014-00XF	HEADER RETAINER ASSY. - LOWER
	0017-00101-0138	#8-5/8 TORX TAMPER RESISTANT SCR. (6 REQ'D.)
5	A353-00021-0000	FLUOR. HEADER LIGHT ASSY. (2 REQ'D.)
6	0017-00009-0393	BLACK SPEAKER GRILL W/SLOTS
	0017-00003-0259	6"x9" SPEAKER - 8 OHM, 8W.
	0017-00101-0127	#8-32x1 1/2 CARRIAGE BOLT (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
7	0508-00900-0000	T.V. BEZEL
8	0508-00905-0000	PLEXI-DIFFUSER
	0508-00901-0000	PLEXI-GLASS CLIPS (4 REQ'D.)
	0017-00101-0017	#6x1 1/2 BLK. SLT. HEX HD. SCREW (4 REQ'D.)
9	0353-00902-00XF	MAIN VIEWING GLASS
	0508-00108-0000	GLASS STOP BRKT.
	0017-00101-0017	#8x3/4 SLT. HEX HD. M.S. (3 REQ'D.)
10	A353-00019-0000	OVERLAY - CONTROL SHELF PLATE ASSY.
	A353-00018-0000	CONTROL SHELF PLATE WELD ASSY.
	0353-00903-0000	DECORATIVE OVERLAY
	0353-00107-0100	CONTROL SHELF MTG. BRKT. - RIGHT
	0353-00107-0200	CONTROL SHELF MTG. BRKT. - LEFT
	0555-00901-0000	PLASTIC LOCATING PIN (4 REQ'D.)
	0017-00009-0534	BASSICK CLAMP (3 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT. HEX HD. SCR. (10 REQ'D.)
	0353-00906-0000	CONTROL SHELF STRAP
11	A353-00015-0000	CONTROL ASSEMBLY
	A353-00006-0000	CONTROL SHELF CABLE ASSY.
12	0017-00042-0260	PUSH BUTTON ASSY. - WHITE (2 REQ'D.)
13	0017-00042-0257	PUSH BUTTON ASSY. - YELLOW (2 REQ'D.)
	0017-00032-0093	PUSH BUTTON SWITCH W/HOLDER (4 REQ'D.)
	0017-00103-0054	5/8-11 PAL NUT (4 REQ'D.)
14	0353-00905-0200	DECAL-LEFT SIDE
	0353-00905-0100	DECAL - RIGHT SIDE (NOT SEEN)
15	0353-00904-0100	DECAL - FRONT
16	0353-00904-0200	DECAL - FRONT
17	A090-00300-11BK	U.S.A. 25¢ DOUBLE COIN DOOR ASSY.
	A982-00015-0000	COIN DOOR CABLE ASSY.
18	0090-00002-04BK	LARGE COIN DOOR FRAME
	0017-00101-0121	#6-32x5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
19	0935-00906-0100	KICK PLATE - 23" LG.
20	0017-00102-0048	3/8-16x2" LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)

NO. 353 - MAPPY - UPRIGHT - REAR



NO. 353 - MAPPY - UPRIGHT - REAR - PARTS LIST

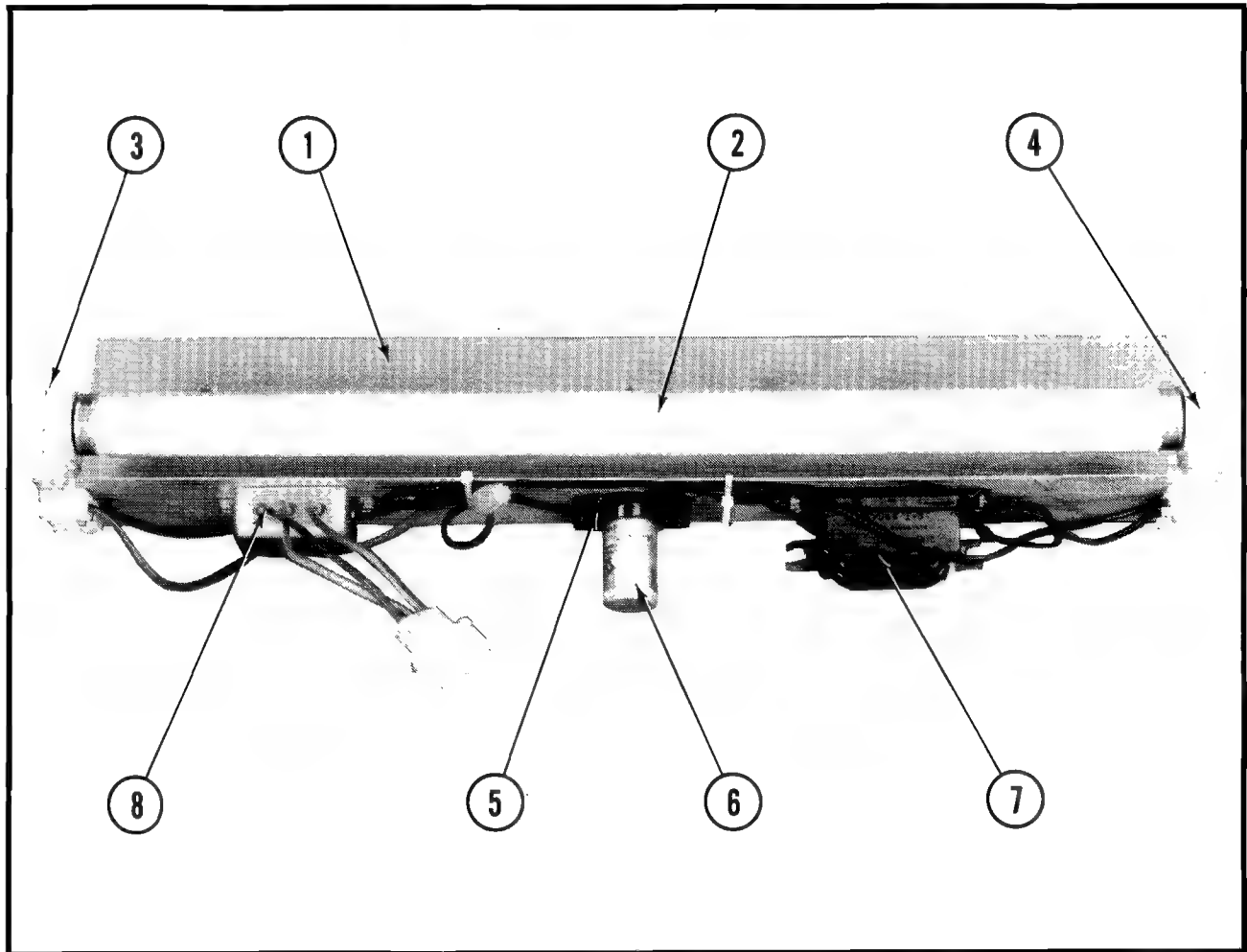
ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	A353-00011-0000	HEADER ASSY.
2	0353-00110-0000	HEADER SUPPORT BRACE
3	0353-00102-0000	SUPPORT ARM BRACKET
4	0017-00009-0545	SUPPORT HINGE (2 REQ'D.)
5	0353-00109-0000	POSITIONING BRKT.
6	0017-00101-0138	#8x $\frac{5}{8}$ TORX TAMPER RESISTANT SCR. (22 REQ'D.)
7	0017-00101-0149	#10x1 $\frac{3}{8}$ TORX TAMPER RESISTANT SCR. (2 REQ'D.)
	0017-00104-0011	#10 EXT. STAR WASHER (2 REQ'D.)
	0017-00104-0039	#10 FLAT WASHER (2 REQ'D.)
8	A945-00038-0000	ON-OFF SWITCH & PLATE ASSY.
9	0894-00916-0000	PLASTIC PULL & VENT (2 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT. HEX HD. M.S. (8 REQ'D.)
10	0017-00003-0339	ELECTROHOME - 19" COLOR DUAL SYNC. HORIZ. MTG. MONITOR (OR)
11	0017-00003-0439	WELLS-GARDNER - 19" COLOR DUAL SYNC. HORIZ. MTG. MONITOR (OR)
12	0017-00003-0454	ZENITH - 19" COLOR DUAL SYNC. HORIZ. MTG. MONITOR
13	0349-00101-0000	MONITOR RAIL (2 REQ'D.)
	0555-00901-0000	PLASTIC LOCATING PIN (4 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT HEX HD. M.S. (8 REQ'D.)
14	0349-00100-0000	MONITOR MTG. ANGLE BRKT. (2 REQ'D.)
	0017-00101-0144	#10-24x $\frac{3}{8}$ SLT. HEX W/WASHER SCR. (4 REQ'D.)
	0017-00101-0082	#10x $\frac{3}{4}$ UNSLOT HEX HD. BOLT (4 REQ'D.)
	0017-00104-0011	#10 EXT. WASHER (4 REQ'D.)
15	0508-00900-0000	19" T.V. BEZEL
	0508-00106-0000	BEZEL MTG. BRKT.
16	0508-00108-0000	GLASS STOP BRKT.
	0017-00101-0027	#8x $\frac{3}{4}$ SLT. HEX HD. M.S. (3 REQ'D.)
17	0017-00003-0259	6"x9" SPEAKER - 8 OHM, 8W.
18	A088-00016-0000	INTELOCK SWITCH & SPRING BRKT. ASSY.
19	A353-00004-0000	CARD RACK ASSY. W/BOARDS
	A084-91476-A316	F.C.C FILTER P.C. BRD. ASSY.
	A084-91479-C353	CPU P.C. BOARD ASSY.
	A084-91480-C353	VIDEO P.C. BOARD ASSY.
	0361-00101-0000	TIE DOWN BRKT (2 REQ'D.)
	0361-00102-0000	SUPPORT BRKT. (2 REQ'D.)
	0017-00101-0124	#6x $\frac{1}{4}$ UNSLOT. HEX HD. SCREW (2 REQ'D.)
20	A082-90427-A000	POWER SUPPLY P.C.B. ASSY. - 70VA.
	0624-00902-0100	P.C. SUPPORT BRKT. - 12" LG. (2 REQ'D.)
	0624-00902-0500	P.C. SUPPORT BRKT. - 6 $\frac{1}{2}$ " LG. (2 REQ'D.)
	0317-00102-0000	P.C. MTG. BRACE BRKT. (4 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT HEX HD. M.S. (10 REQ'D.)
	0017-00104-0037	#8 FLAT WASHER (10 REQ'D.)
21	A945-00036-0002	POWER CHASSIS ASSY. - 70VA., 115V.
22	A961-00007-0000	CASTER ASSEMBLY (2 REQ'D.)
	0961-00109-0000	WHEEL BRKT. (2 REQ'D.)
	0017-00042-0255	PLASTIC WHEEL (2 REQ'D.)
	0894-00702-00XF	SHAFT (2 REQ'D.)
	0017-00100-0037	$\frac{3}{8}$ " E-RING (2 REQ'D.)
23	A945-00019-0000	LINE CORD ASSY.

NO. 353 - MAPPY - UPRIGHT - REAR - PARTS LIST (Cont'd)*ORDER BY PART NUMBER ONLY*

ITEM	PART NO.	DESCRIPTION
		ADDITIONAL PARTS LIST
	A950-00004-0000	COIN BOX ASSEMBLY
	A950-00006-0100	WIRE COIN BOX CRADLE ASSY.
	0950-00105-0000	COIN BOX COVER
	0950-00104-0000	COIN BOX HANDLE
	0950-00101-0000	COIN DEFLECTOR (2 REQ'D.)
	0950-00900-0000	LARGE PLASTIC COIN BOX
	A097-00009-0000	BACK DOOR LOCK ASSY.
	0017-00009-0490	5% SQR. VENT GRILL (4 REQ'D.)
	A353-00008-0000	MASTER CABLE W/BRKT. ASSY.
	A353-00010-0000	HIGH VOLTAGE CABLE ASSY.
	A316-00010-0000	LOW VOLTAGE CABLE ASSY.
	A508-00034-0000	AUDIO ADAPTOR CABLE ASSY.
	A508-00035-0000	VIDEO ADAPTOR CABLE ASSY.
	A508-00024-0000	SIGNAL CABLE ASSY.

NO. 353 - MAPPY - UPRIGHT - HEADER FLUORESCENT LIGHT ASSY.

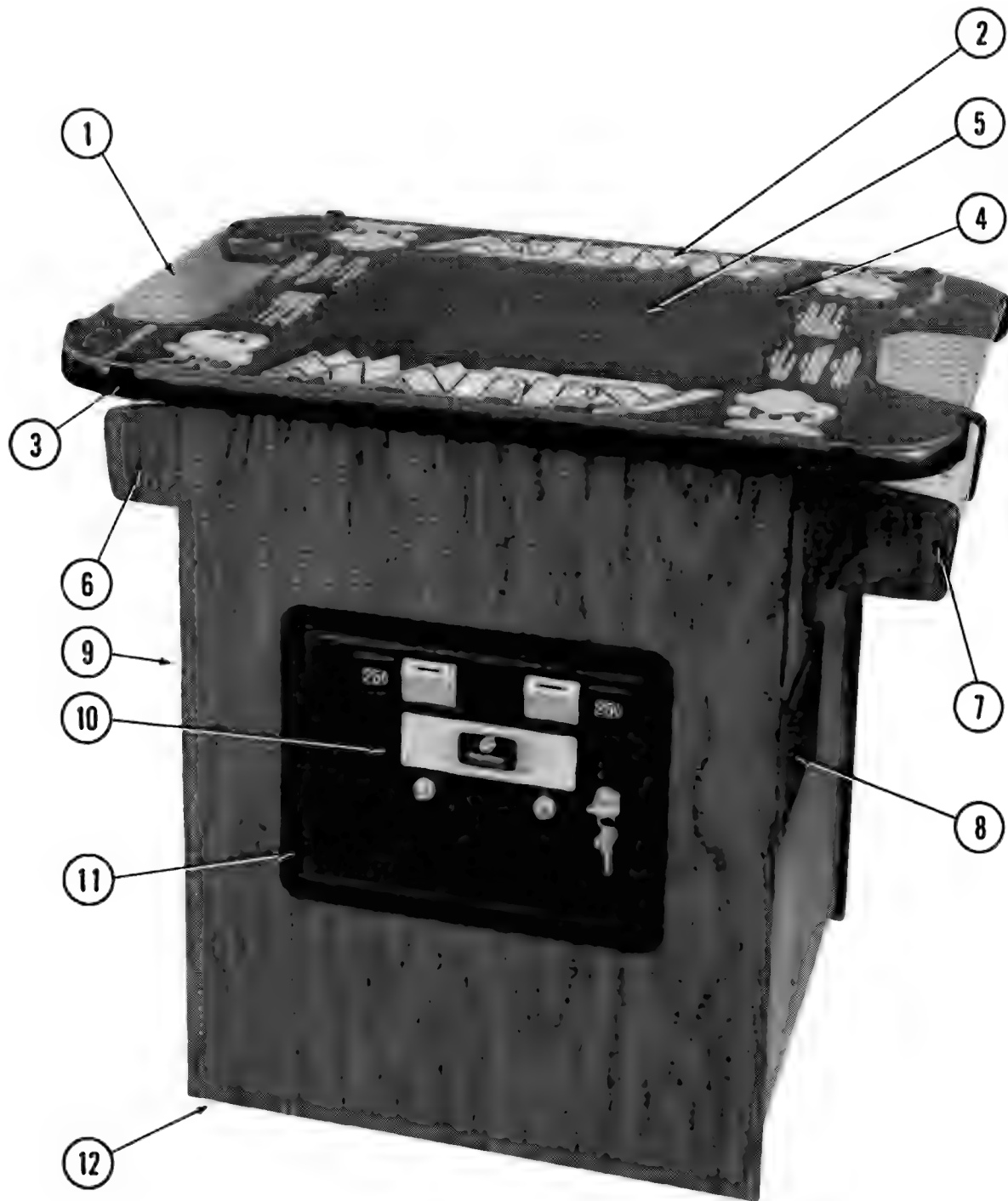


NO. 353 - MAPPY - UPRIGHT - HEADER FLUORESCENT LIGHT ASSY. - PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0353-00113-0000	FLUORESCENT BRKT.
2	0017-00003-0043	18" COOL WHITE FLUORESCENT LAMP
3	0017-00003-0445	LAMP LOCKS (2 REQ'D.)
4	0017-00031-0036	FLUORESCENT SOCKET (2 REQ'D.)
5	0017-00003-0412	FLUORESCENT STARTER HOLDER W/LEADS
	0017-00101-0573	#6-32 x 1/2 PHIL. RND. HD. M.S. (4 REQ'D.)
	0017-00104-0009	#6 EXT. WASHER (4 REQ'D.)
6	0017-00003-0019	FLUORESCENT STARTER
7	0017-00003-0026	BALLAST
	0017-00101-0598	#8-32 x 5/16 SLT. HEX HD. SCR. (4 REQ'D.)
8	A961-00042-0000	LINE FILTER ASSY.

NO. 361 - MAPPY - COCKTAIL - FRONT

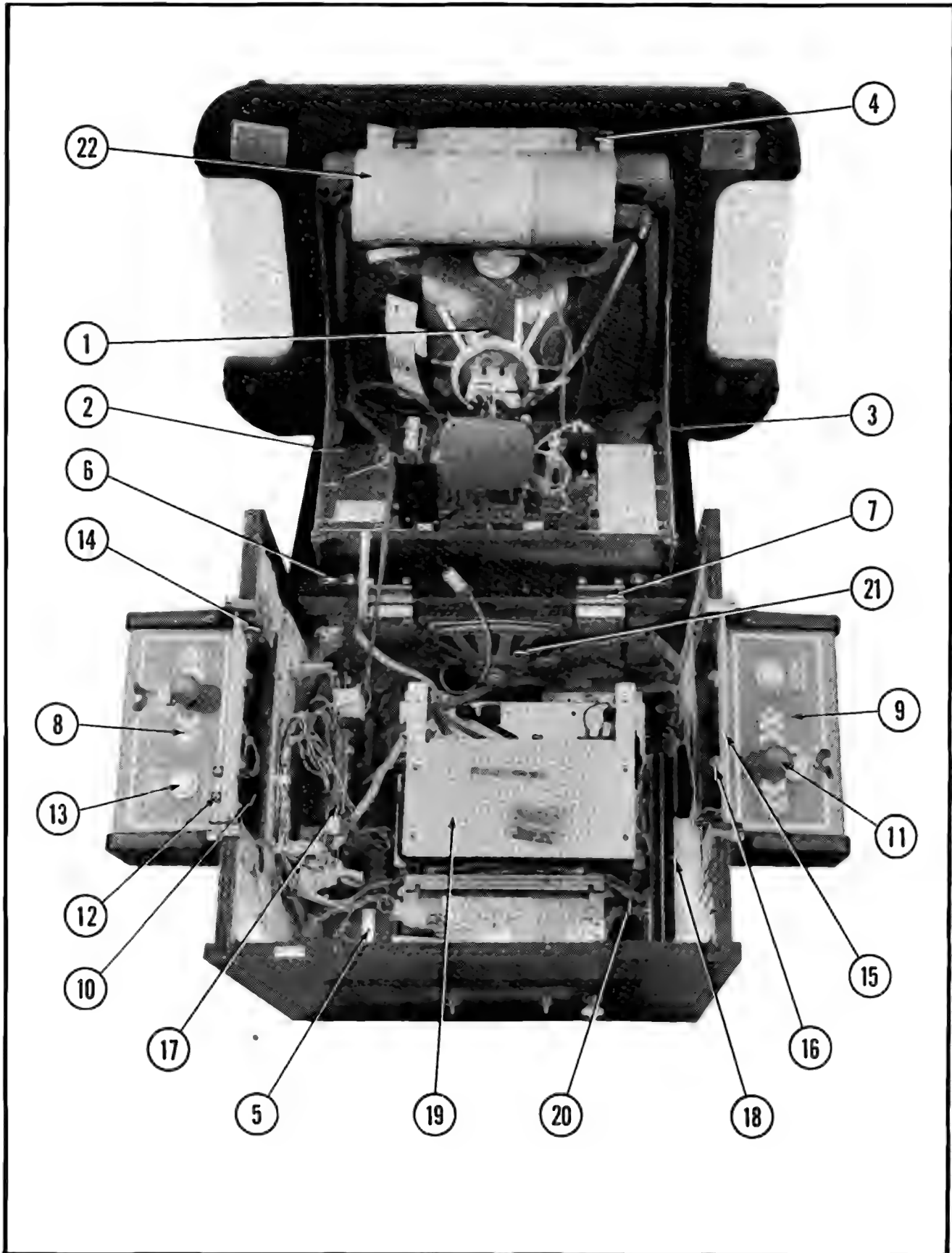


NO. 361 - MAPPY - COCKTAIL - FRONT - PARTS LIST

ORDER BY PART NUMBER **ONLY**

ITEM	PART NO.	DESCRIPTION
1	0017-00009-0499	COVER GLASS — 32" x 22" x 1/4"
2	0361-00900-0000	DECORATIVE ARTWORK UNDERLAY
3	0775-00104-00XF	GLASS CLIPS (8 REQ'D.)
	0017-00101-0117	#8 x 5/8 BLK. PHIL. TRS. HD. SCR. (8 REQ'D.)
4	0557-00900-0000	T.V. BEZEL
5	0508-00905-0000	DIFFUSER
	0508-00901-0000	PLEXI-GLASS CLIPS (4 REQ'D.)
	0017-00101-0017	#6 x 1/2 SLT. HEX HD. SCR. (4 REQ'D.)
6	A361-00004-0100	CONTROL SHELF ASSY. — PLAYER #1
7	A361-00004-0200	CONTROL SHELF ASSY. — PLAYER #2
8	0017-00009-0393	BLACK SPEAKER GRILL W/SLOTS (2 REQ'D.)
9	0017-00009-0482	SPEAKER GRILL (NOT SEEN)
	0017-00003-0187	6" x 9" SPEAKER — 8 OHM, 9W.
	0017-00101-0136	#8-32 x 1-1/4 CARRIAGE BOLT (8 REQ'D.)
	0017-00101-0127	#8-32 x 1-1/2 CARRIAGE BOLT (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (12 REQ'D.)
10	A090-00300-11BK	U.S.A. 25¢ DOUBLE COIN DOOR ASSY.
	A982-00015-0000	COIN DOOR CABLE ASSY.
11	0090-00002-04BK	LARGE COIN DOOR FRAME
	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.) (MOUNTS COIN DOOR TO FRAME)
	A927-00019-0000	COIN BOX ASSEMBLY
	A962-00004-0000	COIN BOX COVER ASSY.
	A962-00005-0000	COIN BOX SIDE CHANNEL ASSY. — SHORT
	0962-00101-0000	COIN BOX SIDE CHANNEL — SHORT
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 FLAT WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
12	0017-00102-0048	3/8-16 x 2" LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)

NO. 361 - MAPPY - COCKTAIL - INTERIOR ACCESS



NO. 361 - MAPPY - COCKTAIL - INTERIOR ACCESS - PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0017-00003-0339	ELECTROHOME — 19" COLOR DUAL SYNC HORIZ. MTG. MONITOR (OR)
1	0017-00003-0439	WELLS-GARDNER - 19" COLOR DUAL SYNC HORIZ. MTG. MONITOR (OR)
1	0017-00003-0454	ZENITH - 19" COLOR DUAL SYNC HORIZ. MTG. MONITOR
2	A515-00019-0000	MONITOR SUPPORT ASSY. - LEFT
3	A515-00019-0100	MONITOR SUPPORT ASSY. - RIGHT
	0017-00101-0109	#8x5/16 UNSLOT. HEX HD. BOLT (6 REQ'D.)
4	0610-00132-00ZN	STRIKE (2 REQ'D.)
5	0017-00009-0534	BASSICK CLAMP (2 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT HEX HD. M.S. (8 REQ'D.)
6	0927-00101-00XF	SUPPORT ANGLE (2 REQ'D.)
	0017-00101-0598	#8-32x5/16 SLT. HEX HD. SCREW (4 REQ'D.)
7	0017-00009-0514	2½" HINGE (2 REQ'D.)
	0017-00101-0136	#8-32x1¼ CARRIAGE BOLT (8 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (8 REQ'D.)
8	0361-00901-0100	DECORATIVE OVERLAY - PLAYER #1
9	0361-00901-0200	DECORATIVE OVERLAY - PLAYER #2
	A361-00011-0000	CONTROL PANEL WELDMENT ASSY. (2 REQ'D.)
10	0510-00101-00XF	BOTTOM PAN (2 REQ'D.)
	0017-00101-0341	#6x¼ PHIL. TRS. HD. SCR. (6 REQ'D.)
11	A353-00015-0000	CONTROL ASSEMBLY (2 REQ'D.)
	A361-00005-0100	CONTROL SHELF CABLE ASSY. - PLAYER #1
	A361-00005-0200	CONTROL SHELF CABLE ASSY. - PLAYER #2
12	0017-00032-0106	PUSH BUTTON (2 REQ'D.)
13	0017-00042-0257	PUSH BUTTON ASSY. - YELLOW
	0017-00032-0093	PUSH BUTTON SWITCH W/HOLDER
	0017-00103-0054	⅝-11 PAL NUT
14	0930-00104-0000	CONTROL PANEL LOCATING BRKT. (4 REQ'D.)
	0017-00101-0025	#8x½ SLT. HEX HD. M.S. (16 REQ'D.)
15	0930-00904-0000	LIGHT SHIELD (2 REQ'D.)
16	0017-00031-0044	WEDGE BASE LAMP SOCKET (4 REQ'D.)
	0017-00003-0219	#194 WEDGE LAMP - 14V., 27A. (4 REQ'D.)
	0017-00101-0555	#6-32x5/16 SLT. HEX HD. M.S. (4 REQ'D.)
17	A353-00004-0000	CARD RACK ASSY. W/BOARDS
	A084-91476-A316	F.C.C. FILTER P.C. BRD. ASSY.
	A084-91479-C353	CPU P.C. BOARD ASSY.
	A084-91480-C353	VIDEO P.C. BOARD ASSY.
	0361-00502-0000	CARD RACK SUPPORT BASE
	0017-00101-0033	#8x1¼ SLT. HEX HD. SCR. (2 REQ'D.)
18	A082-90427-A000	POWER SUPPLY P.C. BOARD ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. - 12" LG.
	0624-00902-0500	P.C. SUPPORT BRKT. - 6½" LG. (2 REQ'D.)
	0317-00102-0000	P.C. MTG. BRACE BRKT. (4 REQ'D.)
	0017-00101-0141	#8x11/16 UNSLOT HEX HD. M.S. (10 REQ'D.)
	0017-00104-0037	#8 FLAT WASHER (10 REQ'D.)
19	A945-00036-0000	POWER CHASSIS ASSY. - 70VA., 115V.

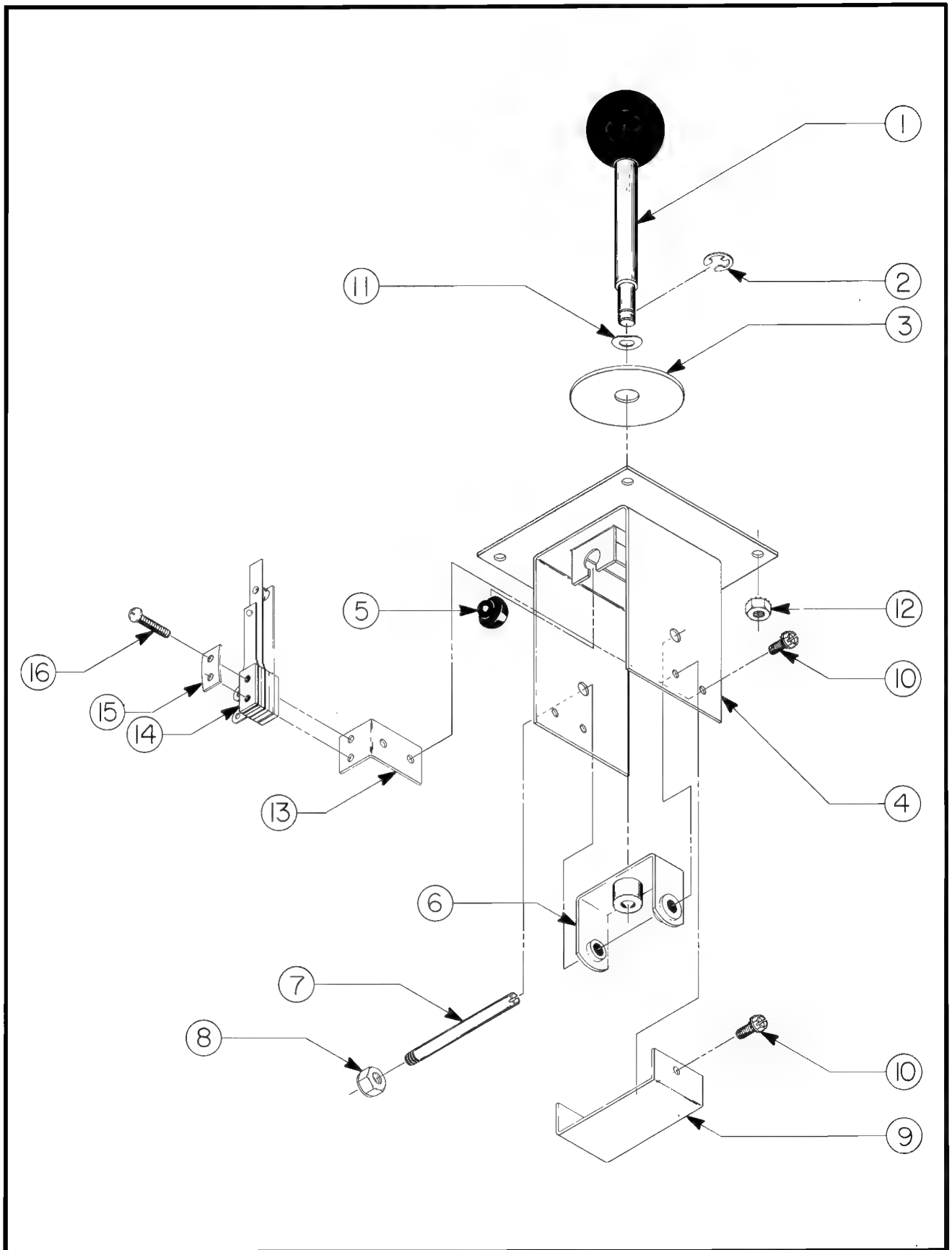
NO. 361 - MAPPY - COCKTAIL - INTERIOR ACCESS - PARTS LIST (Cont'd)*ORDER BY PART NUMBER ONLY*

ITEM	PART NO.	DESCRIPTION
20	A775-00013-0000 0017-00003-0222 0775-00110-00XF 0749-00106-00XF 0017-00101-0347 0017-00104-0009 0017-00103-0005 0017-00101-0026	FAN ASSY. 4" MUFFIN FAN FAN PLATE VENT SCREEN #6-32x½" R.H.M.S. (4 REQ'D.) #6 EXT. WASHER (4 REQ'D.) #6-32 HEX NUT (4 REQ'D.) #8x⅝ SLT. HEX HD. SCREW (4 REQ'D.)
21	0017-00003-0187	6"x9" SPEAKER - 8 OHM, 9W.
22	0942-00902-0000	MONITOR SHIELD
ADDITIONAL PARTS LIST		
	A088-00018-0000 A945-00038-0000 A361-00007-0000 A316-00010-0000 A317-00006-0000 A510-00014-0000 A508-00034-0000 A508-00035-0000 A927-00005-0000	INTERLOCK SWITCH & BRKT. ASSY. ON-OFF SWITCH & PLATE ASSY. MASTER CABLE W/BRKT. ASSY. & VIDEO LOW VOLTAGE CABLE ASSY. HIGH VOLTAGE CABLE ASSY. MONITOR SIGNAL CABLE ASSY. AUDIO ADAPTOR CABLE ASSY. VIDEO ADAPTOR CABLE ASSY. HIGH BASE LEG KIT ASSY. - OPTIONAL

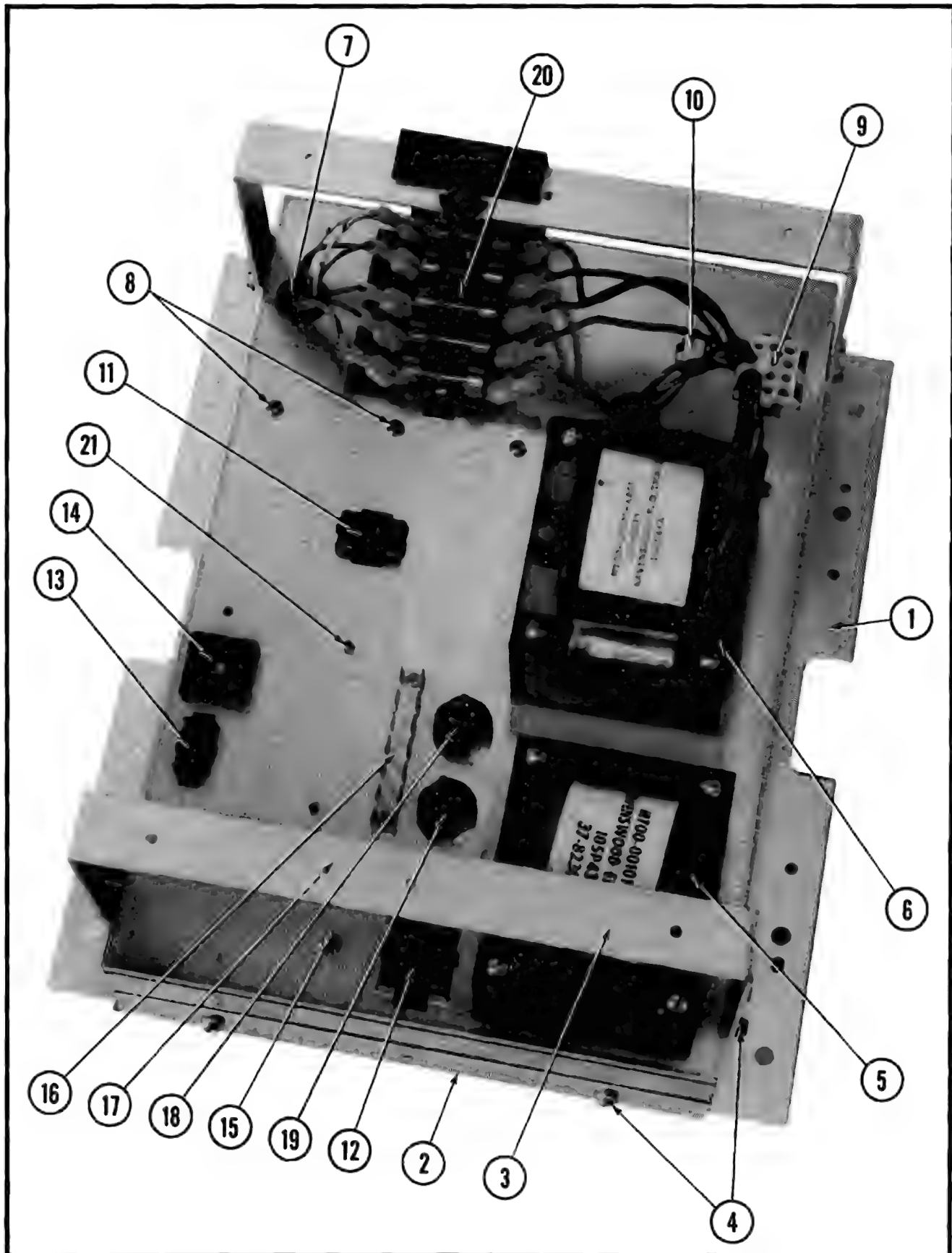
MAPPY - CONTROL ASSY. UPRIGHT & COCKTAIL - PARTS LIST*ORDER BY PART NUMBER ONLY*

ITEM	PART NO.	DESCRIPTION
1	A866-00207-0000	MOLDED 1⅜" DIA. BALL & SHAFT ASSY.
2	0017-00100-0025	¼" E-RING
3	0852-00106-0000	FOLLOWER PLATE
4	A353-00016-0000	TOP PLATE TO MAIN CONTROL BRKT. ASSY.
5	0017-00041-0616	RUBBER BUPPER - 90 DUROMETER (2 REQ'D.)
6	A866-00027-0000	PIVOT BRKT. HUB & BEARING ASSY.
7	0852-00701-00XF	PIVOT PIN
8	0017-00103-0011	#10-32 LOCK NUT
9	0508-00112-00XF	BRACE-MAIN BRKT.
10	0017-00101-0555	#6-32x5/16 SLT. HEX HD. M.S. (4 REQ'D.)
11	0017-00104-0116	SPRING WASHER
12	0017-00103-0061	#8-32 LOCK NUT W/SEMS (4 REQ'D.)
13	0353-00108-0000	SWITCH BRKT. (2 REQ'D.)
14	A353-00020-0000	LEAF SWITCH ASSY. (2 REQ'D.)
15	0020-00202-0000	SWITCH PLATE (2 REQ'D.)
16	0017-00101-0527	#5-40x⅝ PHIL. RND. HD. M.S. (4 REQ'D.)

MAPPY - CONTROL ASSY. UPRIGHT & COCKTAIL



MAPPY - POWER CHASSIS ASSY. - 70VA, 115V. - ALL VERSIONS

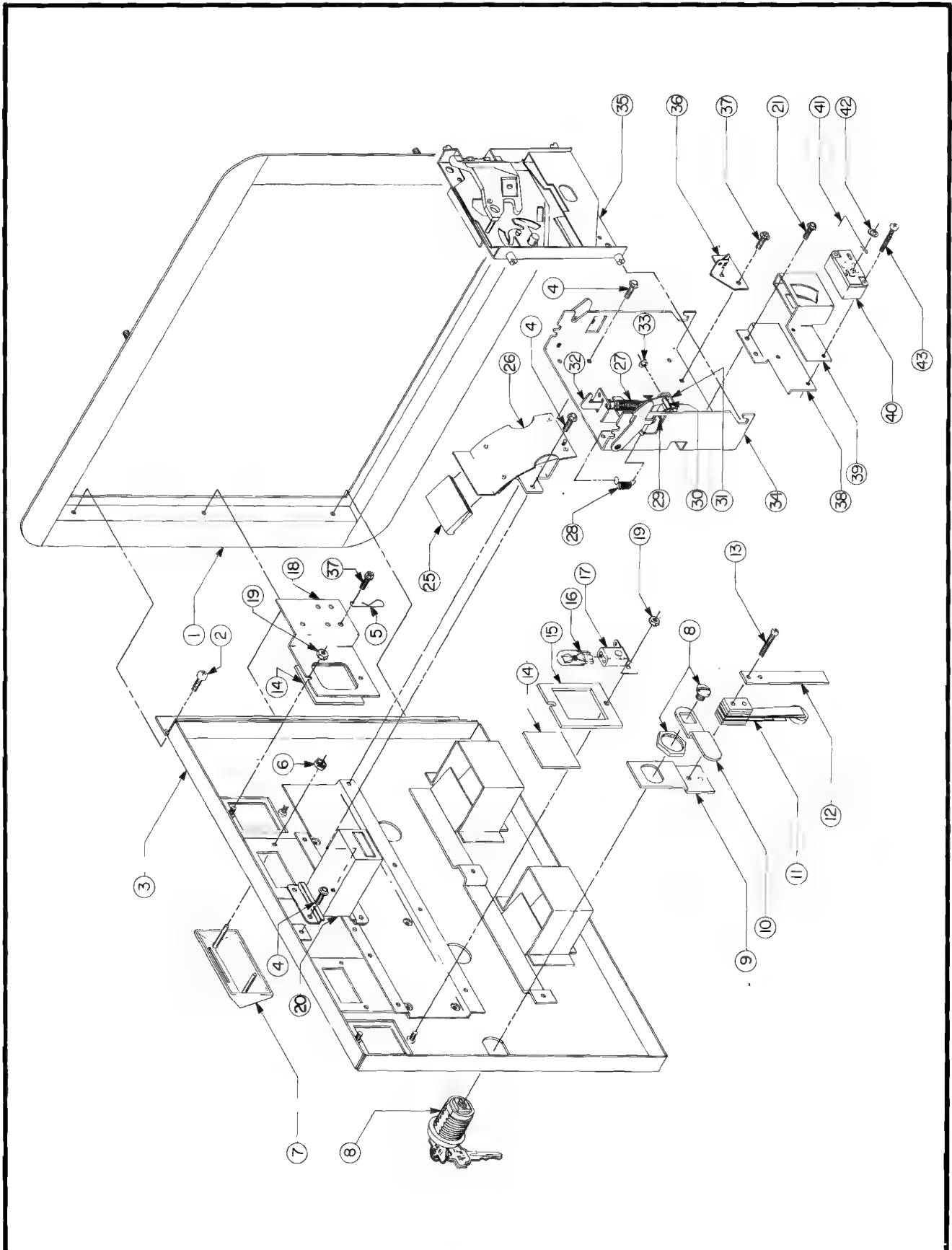


MAPPY - POWER CHASSIS ASSY. - 70VA, 115V. - ALL VERSIONS - PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0945-00108-00XF	CHASSIS
2	A945-00029-0100	MTG. PLATE & BARRIER ASSY.
3	0945-00107-01XF	STRAP (2 REQ'D.)
4	0017-00101-0123	#8 x 1/4 UNSLOT. HEX HD. SCR. (12 REQ'D.)
5	MT00-00101-B000	ISOLATION TRANSFORMER W/O SHIELD ASSY. — 115V., 50/60 HZ.
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
6	MT00-00105-A000	POWER TRANSFORMER W/O SHIELD — 70VA, 115V. (UPRIGHT ONLY)
6	MT00-00105-B000	POWER TRANSFORMER W/SHIELD — 70VA, 115V. (COCKTAIL ONLY)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
7	0945-00902-0000	SNAP BUSHING (3 REQ'D.)
8	0017-00101-0067	#6 x 3/8 PHIL. PAN HD. SCR. (11 REQ'D.)
	0945-00103-00XF	PARTITION — LOCATED UNDER CHASSIS (NOT SEEN)
9	A945-00030-0400	CONNECTOR & CABLE ASSY.
10	0017-00021-0297	2 POSITION CONNECTOR
11	A945-00030-0300	CONNECTOR & CABLE ASSY.
12	A945-00030-0500	CONNECTOR & CABLE ASSY.
13	A945-00030-0200	CONNECTOR & CABLE ASSY.
14	A945-00021-0000	CONVENIENCE OUTLET ASSY.
15	0017-00101-0573	#6-32 x 1/2 PHIL. RND. HD. SCR. (2 REQ'D.)
	0017-00103-0084	#6-32 HEX NUT W/SEMS (2 REQ'D.)
	A945-00025-0000	FILTER ASSY. — 125V. — UNDER CHASSIS (NOT SEEN)
16	0017-00021-0510	TERMINAL STRIP
	0017-00101-0140	#4-40 x 5/16 PHIL. PAN HD. SCR. (2 REQ'D.)
17	0017-00101-0660	#10-32 x 3/4 SLT. PAN HD. SCREW (NOT SEEN)
	0017-00104-0107	#10 FLAT WASHER
	0017-00103-0081	#10-32 HEX NUT W/SEMS
18	0017-00003-0263	SLO-BLO FUSE — 4A., 250V.
19	0017-00003-0005	FUSE — 2A., 250V.
	0017-00003-0444	FUSE HOLDER — QUICK CONN. (2 REQ'D.) — FOR ABOVE FUSES
20	0945-00904-0000	5 POSITION FUSE HOLDER
	0945-00908-0000	FUSE BLOCK INSULATOR
	0017-00003-0217	SLO-BLO FUSE — 2.5A., 250V. (2 REQ'D.)
	0017-00003-0007	SLO-BLO FUSE — 3A., 250V. (2 REQ'D.)
	0017-00003-0263	SLO-BLO FUSE — 4A., 250V.
	0945-00903-0000	FUSE HOLDER BARRIER
	0017-00101-0067	#6 x 3/8 PHIL. PAN HD. SCREW (2 REQ'D.)
21	0017-00101-0780	#6 x 1/2 PHIL. PAN HD. SCREW (2 REQ'D.)
	0017-00021-0629	5 POSITION TERMINAL STRIP (UNDER CHASSIS)
	A945-00019-0000	LINE CORD ASSY. — 115V. (NOT SHOWN)
	A945-00033-0000	MAGNETIC SHIELD & LABEL ASSY. (NOT SHOWN)

FRONT DOOR ASSEMBLY — U.S.A. 25¢

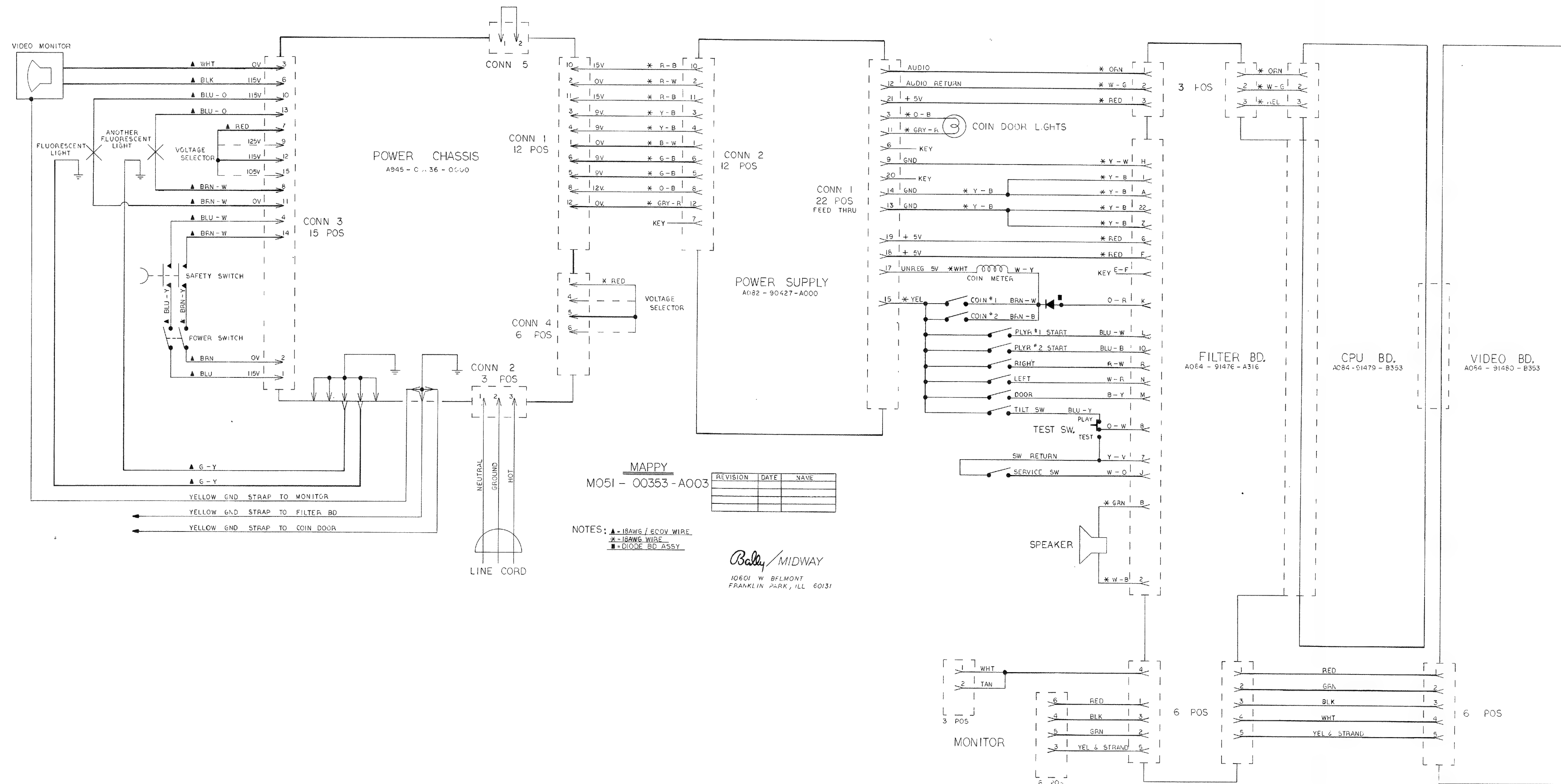


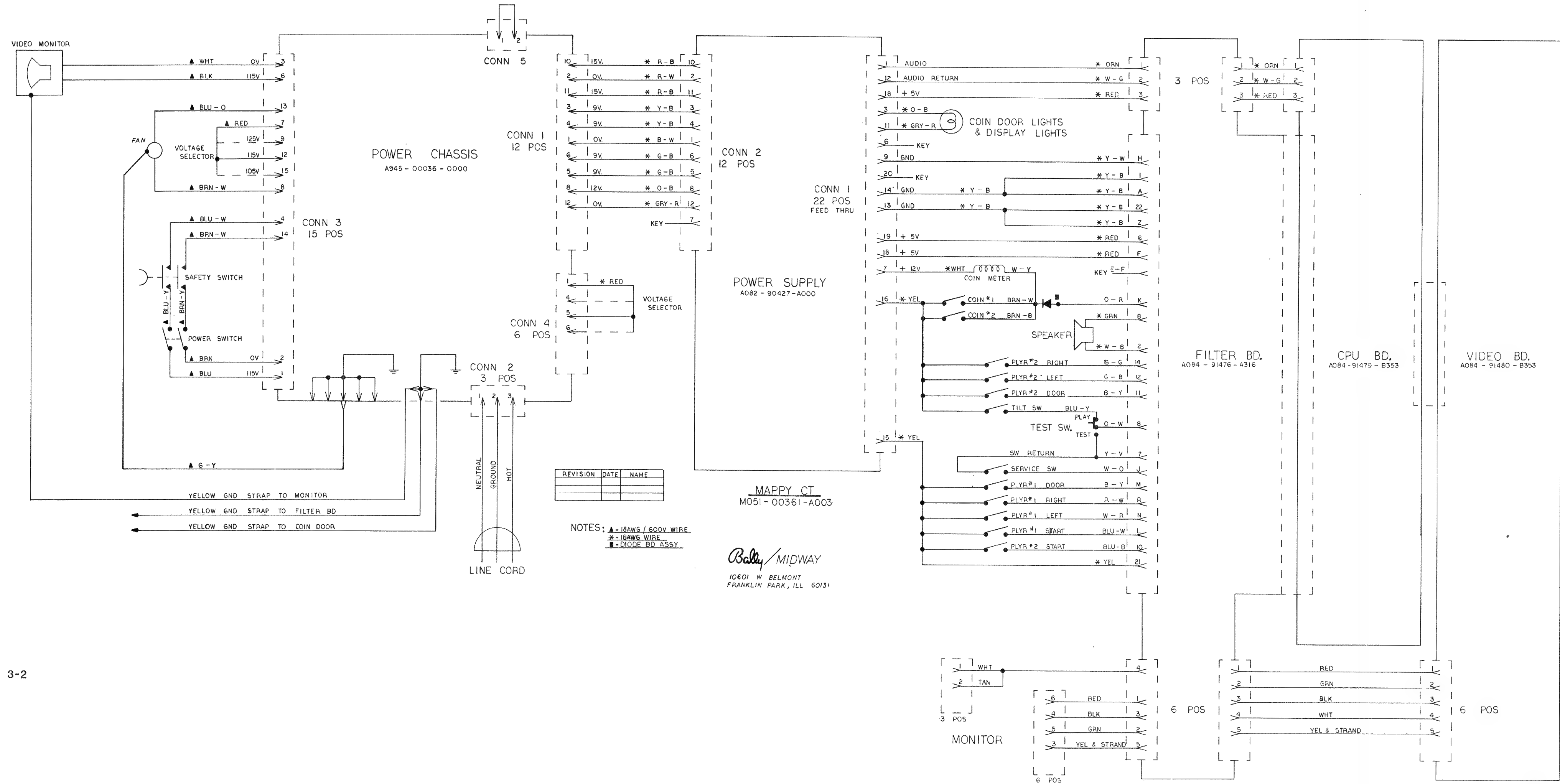
FRONT DOOR ASSEMBLY — U.S.A. 25¢ — PARTS LIST

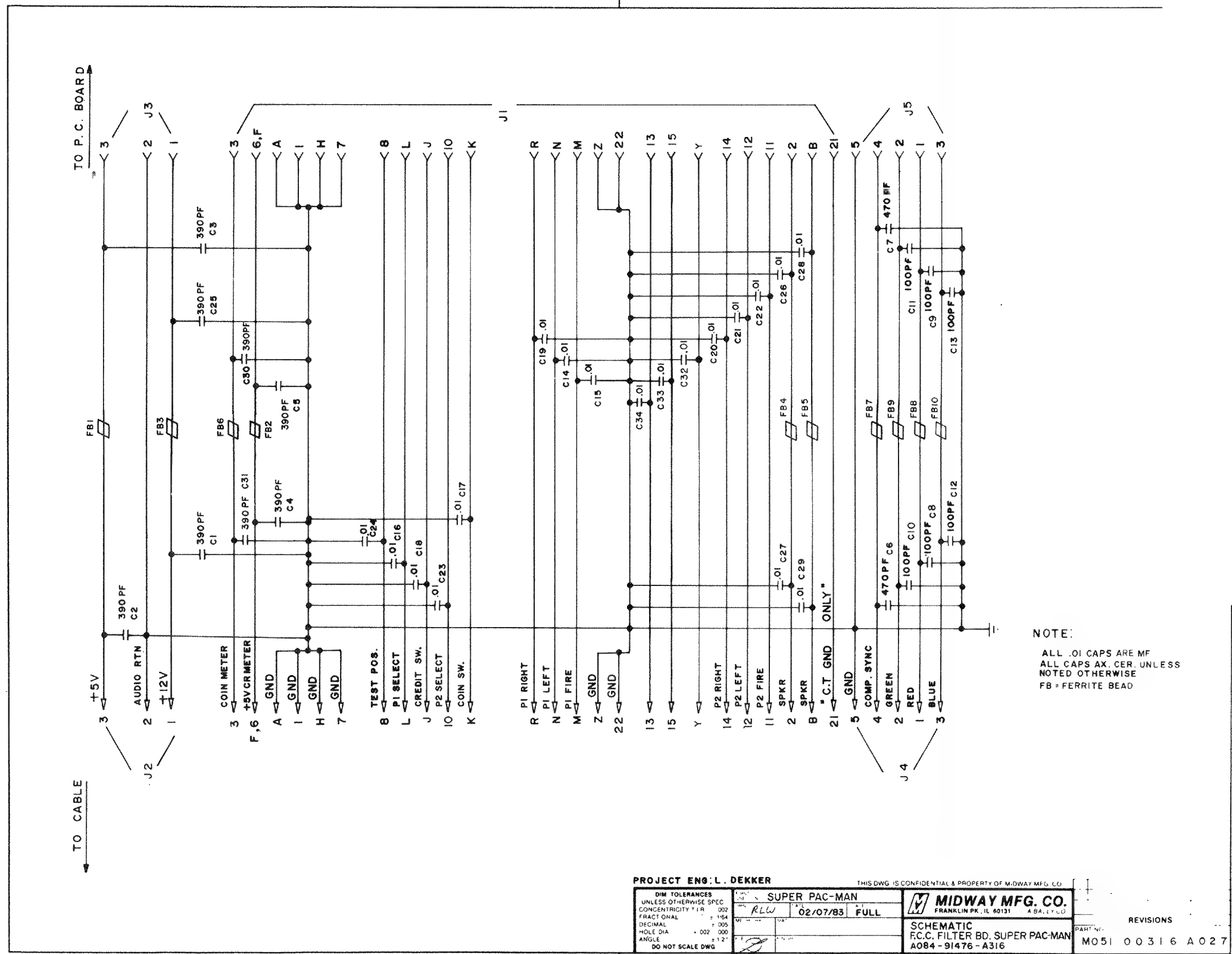
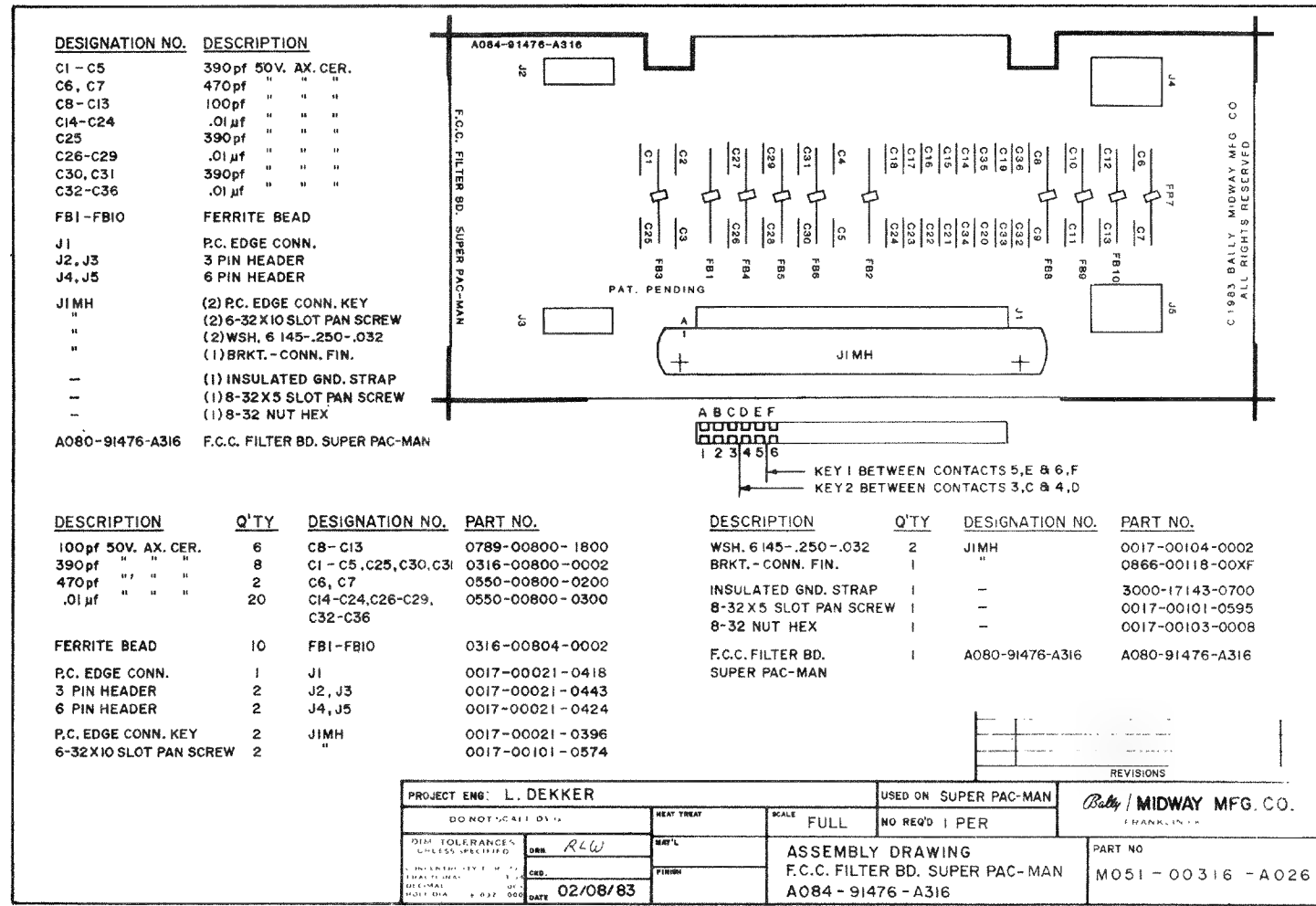
ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0090-00002-04BK	DOUBLE ENTRY COIN DOOR FRAME
2	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
3	A090-00073-02BK	DOUBLE ENTRY COIN DOOR W/DRESS PLATE
4	0017-00101-0123	#8 x 1/4 UNSLOT. HEX HD. SCREW (12 REQ'D.)
5	0017-00007-0019	KEY HOOK
6	0017-00103-0059	PUSH NUT (4 REQ'D.)
7	0090-00912-0000	COIN ENTRY PLATE — 25¢ (2 REQ'D.)
8	A097-00005-0000	DOOR LOCK & KEY W/SCREW & NUT (OR)
8	A097-00006-0000	DOOR LOCK & KEY W/SCREW & NUT
9	0090-00128-00XF	DOOR TILT SWITCH BRKT.
10	0017-00005-0225	DOOR CAM
11	A090-00095-0000	DOOR TILT SWITCH
12	0090-00126-03XF	SWITCH BACK-UP PLATE
13	0017-00101-0525	#5-40 x 9/16" PHIL. HD. M.S. (2 REQ'D.)
	A090-00096-0000	DOOR TILT SWITCH & BRKT. ASSY. (ITEMS 9 & 11 THRU 13)
14	0090-00903-9500	25¢ WINDOW (2 REQ'D.)
15	0090-00143-00XF	COIN PLEX RETAINER
16	0017-00003-0219	12 VOLT LAMP — G.E. #194 (2 REQ'D.)
17	0017-00031-0048	WEDGE SOCKET W/BRKT. (2 REQ'D.)
18	A090-00100-0000	BRKT. ASSY.
19	0017-00103-0084	#6-32 HEX NUT W/SEMS (4 REQ'D.)
20	A090-00089-0000	COIN METER W/DIODE
21	0017-00101-0124	#6 x 1/4 UNSLOT. HEX HD. SCR. (4 REQ'D.)
25	0090-00911-0000	INSULATOR (2 REQ'D.)
26	A090-00112-0000	COIN CHUTE & TOP ASSY. (2 REQ'D.)
27	0010-00134-0000	SPRING
28	0010-00181-0000	SPRING
29	0017-00007-0083	1/8 x 1-5/8 ROLL PIN
30	0090-00129-00XF	PIVOT POST
31	0090-00167-00XF	PIVOT LEVER
32	0090-00182-00XF	REJECT LEVER
33	0017-00100-0018	E-RING
	A090-00088-0000	REJECT LEVER ASSY. (2 REQ'D.) (ITEMS 30 THRU 33)
34	A090-00105-0000	COIN ACCEPTOR FRAME ASSY. (2 REQ'D.)
35	0017-00005-0003	COIN ACCEPTOR W/STRING CUTTER (2 REQ'D.) (OR)
35	0017-00005-0211	COIN ACCEPTOR W/ANTI STRING DEVICE (2 REQ'D.) (OR)
35	0017-00005-0214	COIN ACCEPTOR W/STRING CUTTER (2 REQ'D.)
36	A090-00064-0000	ANTI-PENNY DEVICE
37	0017-00101-0099	#6 x 1/4 SLT. HEX HD. M.S. (2 REQ'D.)
38	0090-00162-00XF	COIN SWITCH MTG. BRKT.
39	0017-00005-0203	COIN SWITCH CHUTE
40	0017-00005-0195	COIN SWITCH
41	0010-00599-0000	COIN SWITCH WIRE
42	0017-00007-0015	PUSH-ON RING
	A090-00059-0400	COIN SWITCH & WIRE ASSY. (ITEMS 40 THRU 42)
43	0017-00101-0147	#4-40 x 3/4 PHIL. PAN. HD. M.S. (2 REQ'D.)
	A090-00077-0000	COIN GUIDE & SWITCH ASSY. (ITEMS 38 THRU 43)

Schematics and Wiring Diagrams

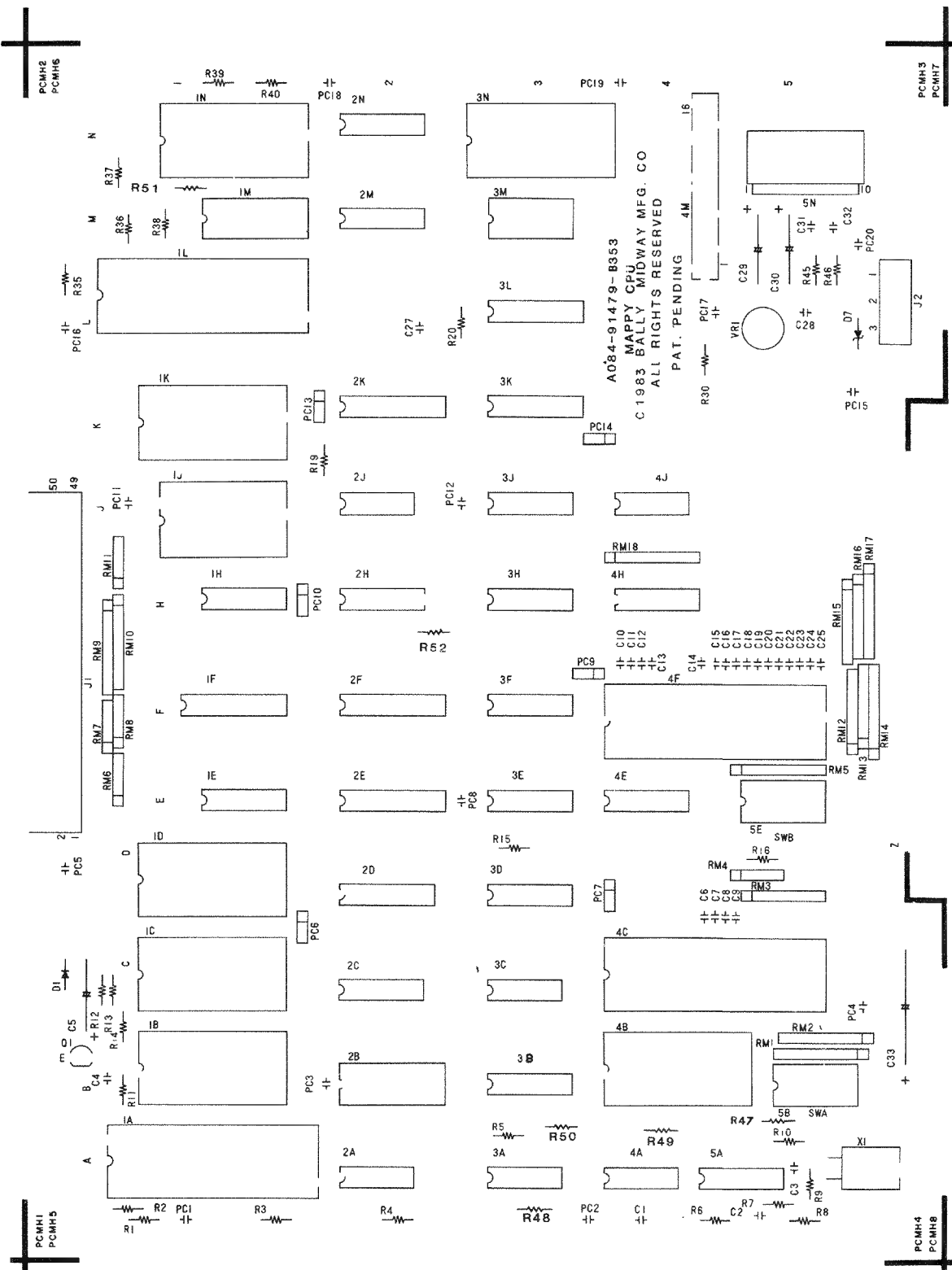






DESIGNATION LIST

DESIGNATION NO.	DESCRIPTION	DESIGNATION NO.	DESCRIPTION
C3	100 PF	IC 1E	74LS367
C4	.001 MF	IC 2E	74LS245
C5	22 MF AX ELEC.	IC 3E,4E	74LS157
C6-C25	.01 MF		
C28	.01 MF	IC 1F,2F	74LS245
C29	2.2 MF AX ELEC.	IC 3F	74LS257
C30	47 MF AX ELEC.	IC 4F	58XX CUSTOM IC
C31,32	.033 MF		
C33	220 MF	IC 1H,2H	74LS367
		IC 3H	74LS257
		IC 4H	74LS368
PC1-PC5	0.1 MF		
PC6,PC7	1 MF		
PC8	0.1 MF	IC 2J	74LS74
PC9,PC10	1 MF	IC 3J	74LS158
PC11,PC12	0.1 MF	IC 4J	74LS05
PC13,PC14	1 MF		
PC15-PC20	0.1 MF	IC 1K	2764 EPROM MP1-4
		IC 2K	74LS245
		IC 3K	M2148 RAM KIT A
R1	2.2K OHM 1/4W 5%	IC 1L	CPU 68A09E
R2	1K OHM 1/4W 5%	IC 3L	M2148 RAM KIT A
R3	470 OHM 1/4W 5%		
R4,R5	1K OHM 1/4W 5%		
R7	330 OHM 1/4W 5%	IC 1M	PAL SPC-5
R10	330 OHM 1/4W 5%	IC 2M	74LS259
R11	47K OHM 1/4W 5%	IC 3M	BP ROM
R12	4.7K OHM 1/4W 5%	IC 4M	99XX CUSTON IC
R13	2.2K OHM 1/4W 5%		
R14,R15	1K OHM 1/4W 5%	IC 1N	07XX CUSTOM IC
R16	4.7K OHM 1/4W 5%	IC 2N	74LS367
R19	1K OHM 1/4W 5%	IC 3N	15XX CUSTOM IC
R30	10K OHM 1/4W 5%	IC 5N	LA 4460 AUDIO AMP
R35	2.2K OHM 1/4W 5%		
R36,R37	1K OHM 1/4W 5%	HS IC 5N	HEATSINK
R38	470 OHM 1/4W 5%		
R39,R40	1K OHM 1/4W 5%		
R45,R46	4.7 OHM 1/4W 5%		
R47-R52	100 OHM 1/4W 5%		
RM1,RM2	4.7K OHM 9 PIN SIP 1/8W	ICS 1A	40 PIN IC SOCKET
RM3	2.2K OHM 8 PIN SIP 1/8W	ICS 1B	28 PIN IC SOCKET
RM4	1K OHM 5 PIN SIP 1/8W	ICS 2B	20 PIN IC SOCKET
RM5	2.2K OHM 9 PIN SIP 1/8W	ICS 4B	28 PIN IC SOCKET
RM6,RM7,RM8	2.2K OHM 5 PIN SIP 1/8W	ICS 4C	42 PIN IC SOCKET
RM9,RM10	2.2K OHM 9 PIN SIP 1/8W	ICS 1D	28 PIN IC SOCKET
RM11	2.2K OHM 5 PIN SIP 1/8W	ICS 2D	18 PIN IC SOCKET
RM12,RM13	2.2K OHM 8 PIN SIP 1/8W	ICS 4F	42 PIN IC SOCKET
RM14	1K OHM 9 PIN SIP 1/8W	ICS 1K	28 PIN IC SOCKET
RM15,RM16	2.2K OHM 8 PIN SIP 1/8W	ICS 3K	18 PIN IC SOCKET
RM17	1K OHM 9 PIN SIP 1/8W	ICS 1L	40 PIN IC SOCKET
RM18	4.7K OHM 9 PIN SIP 1/8W	ICS 3L	18 PIN IC SOCKET
		ICS 1M	16 PIN IC SOCKET
		ICS 3M	20 PIN IC SOCKET
		ICS 1N	28 PIN IC SOCKET
VR1	1K POT		
D1	1N914B	J2	3 PIN AMP CONN.
D7	1N4735A		
Q1	2N3391A	J1	50 PIN CONN. SOCKET
			50 PIN CABLE ASSY
IC 1A	CPU 68A09E		
IC 2A	74LS74	MHHSIC 5N	H.S. MTG. SCREW 4-40X7 PAN HD
IC 3A	74LS04	MHHSIC 5N	H.S. #4 FLT. WASHER
IC 4A	74LS02	MHHSIC 5N	H.S. 4-40 HEX. NUTS
IC 5A	74LS368		
IC 1B	2764 EPROM MP1-1	PC MH1-PC MH4	P.C. MTG. SCREW 6-32X6
IC 2B	PAL SPC-6	PC MH5-PC MH8	METAL STANDOFFS CARD SPACER FIN.
IC 3B	74LS109		
IC 4B	16XX CUSTOM IC		
IC 1C	2764 EPROM MP1-2	SWA,SWB	8 POS. DIP. SW.
IC 2C	74LS138		
IC 3C	74LS32	X1	18.432 MHZ CRYSTAL
IC 4C	58XX CUSTOM IC	A080-91479-B353	MAPPY CPU P.C.
IC 1D	2764 EPROM MP2-3		
IC 2D	2114 STATIC RAY		
IC 3D	74LS161		

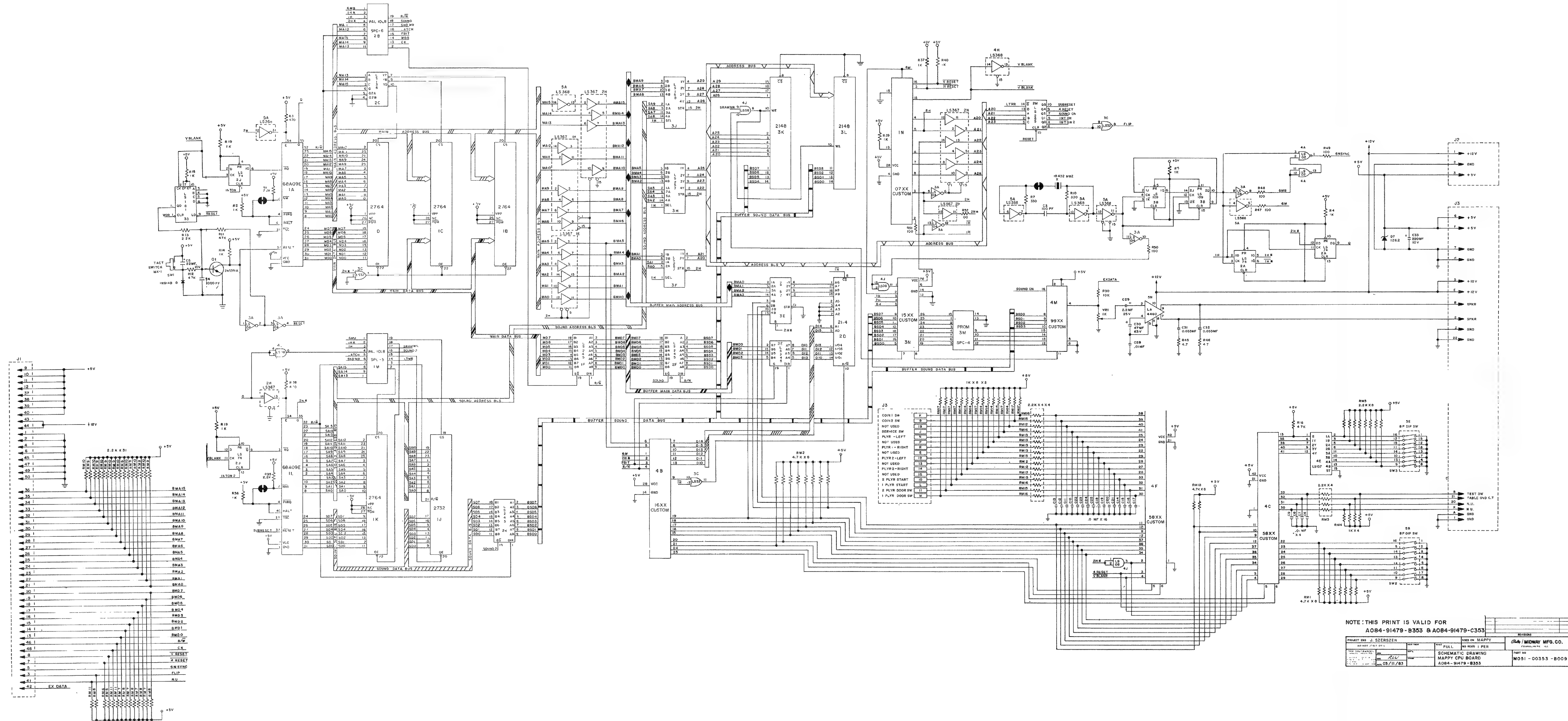


CROSS REFERENCE LIST

DESCRIPTION	QTY	DESIGNATION NO.	PART NOS.	DESCRIPTION	QTY	DESIGNATION NO.	PART NOS.
100 PF	1	C3	0300-00800-0500	CPU 68A09E	2	IC 1A,1L	0316-00803-0011
.001 MF	1	C4	0300-00800-0600	07XX CUSTOM IC	1	IC 1N	0066-006CX-XAPX
.033 MF	2	C31,C32	0353-00800-0002	15XX CUSTOM IC	1	IC 3N	0066-020CX-XAPX
.01 MF	21	C6-C25,C28	0353-00800-0001	16XX CUSTOM IC	1	IC 4B	0066-021CX-XAPX
0.1 MF	14	PC1-PC5,PC8,PC11,PC12,PC15-PC20	0508-00800-0900	58XX CUSTOM IC	2	IC 4C,4F	0066-028CX-XAPX
1 MF	6	PC6,PC7,PC9,PC10,PC13,PC14	0935-00814-0100	LA 4460 AUDIO AMP	1	IC 5N	0066-373BX-XBAX
2.2 MF AX ELEC	1	C29	0353-00800-0005	99XX CUSTOM IC	1	IC 4M	0066-029CX-XAPX
22 MF AX ELEC	1	C5	0353-00800-0004	HEATSINK	1	HS IC 5N	0353-00900-0000
47 MF AX ELEC	1	C30	0353-00800-0003				
220 MF	1	C33	0508-00800-1400	16 PIN IC SOCKET	1	ICS 3M	0932-00817-0100
				18 PIN IC SOCKET	3	ICS 2D,3K,3L	0300-00804-0900
4.7 OHM 1/4W 5%	2	R45,R46	0062-042B3-1XXX	20 PIN IC SOCKET	2	ICS 1M,2B	0550-00804-2300
100 OHM 1/4W 5%	6	R47-R52	0062-110B3-1XXX	28 PIN IC SOCKET	7	ICS 1B,1C,1D,1K,1N,3N,4B	0508-00804-0400
330 OHM 1/4W 5%	2	R7,R10	0062-144B3-1XXX	40 PIN IC SOCKET	2	ICS 1A,1L	0508-00804-1800
470 OHM 1/4W 5%	2	R3,R38	0062-156B3-1XXX	42 PIN IC SOCKET	2	ICS 4C,4F	0508-00804-1900
1K OHM 1/4W 5%	10	R2,R4,R5,R14,R15,R19,36,37,39,40	0062-179B3-1XXX				
2.2K OHM 1/4W 5%	3	R1,R13,R35	0062-195B3-1XXX	3 PIN AMP. CONN.	1	J2	0017-00021-0443
4.7K OHM 1/4W 5%	2	R12,R16	0062-211B3-1XXX	50 PIN CONN. SOCKET	1	J1	0300-00804-1104
10K OHM 1/4W 5%	1	R30	0062-227B3-1XXX	50 PIN CABLE ASSY	1		A300-00020-0000
47K OHM 1/4W 5%	1	R11	0062-259B3-1XXX				
1K OHM 5 PIN SIP 1/8W	1	RM4	0508-00804-0100	HEATSINK MTG.SCREW	2	MH HS IC 5N	0017-00101-0511
1K OHM 9 PIN SIP 1/8W	2	RM14,RM17	0508-00804-0200	4-40X7 PAN HD			
2.2K OHM 5 PIN SIP 1/8W	4	RM6,RM7,RM8,RM11	0353-00804-0001				
2.2K OHM 9 PIN SIP 1/8W	3	RM5,RM9,RM10	0508-00804-0300	H.S. #4 FLT. WASHER	4	MH HS IC 5N	0017-00104-0092
4.7K OHM 9 PIN SIP 1/8W	3	RM1,RM2,RM18	0508-00804-1000				
2.2K OHM 8 PIN SIP 1/8W	5	RM3,RM12,RM13,RM15,RM16	0508-00804-1200	H.S. 4-40 HEX NUTS	2	MH HS IC 5N	0017-00103-0093
POT 1K	1	VR1	0508-00804-1300	PC. MTG. SCREW 6-32X6	4	PCMH1-PCMH4	0017-00101-0339
1N914B	1	D1	0508-00801-0100	METAL STANDOFF	4	PCMH5-PCMH8	0316-00700-00XF
1N4735A	1	D7	0064-079XX-XXJX	CARD SPACER FIN.			
2N3391A	1	Q1	0508-00802-0200				
74LS02	1	IC 4A	0300-00803-0028				
74LS04	1	IC 3A	0300-00803-0029	8 POS. DIP SW.	2	SWA,SWB	0300-00804-070C
74LS08	1	IC 4J	0300-00803-0030				
74LS32	1	IC 3C	0300-00803-0031	18.432 MHZ	1	CRYSTAL 1	0508-00804-1400
74LS74	2	IC 2A,2J	0300-00803-0032	MAPPY CPU P.C.	1		A080-91479-B353
74LS109	1	IC 3B	0316-00803-0001				
74LS138	1	IC 2C	0300-00803-0033				
74LS157	2	IC 3E,4E	0300-00803-0050				
74LS158	1	IC 3J	0300-00803-0049				
74LS161	1	IC 3D	0300-00803-0044				
74LS245	4	IC 1F,2E,2F,2K	0300-00803-0046				
74LS257	2	IC 3F,3H	0316-00803-0002				
74LS259	1	IC 2M	0316-00803-0003				
74LS367	4	IC 1E,1H,2H,2N	0300-00803-0039				
74LS368	2	IC 4H,5A	0316-00803-0004				
M2148 RAM KIT A	2	IC 3K,3L	0550-00803-6200				
2114 STATIC RAM	1	IC 2D	0508-00803-0300				
PAL SPC-6	1	IC 2B	0316-00803-0010				
PAL SPC-5	1	IC 1M	0316-00803-0009				
BP ROM	1	IC 3M	0353-00803-0005				
2764 EPROM MP1-1	1	IC 1B	0353-00803-0001				
2764 EPROM MP1-2	1	IC 1C	0353-00803-0002				
2764 EPROM MP2-3	1	IC 1D	0353-00803-0003				
2764 EPROM MP1-4	1	IC 1K	0353-00803-0004				

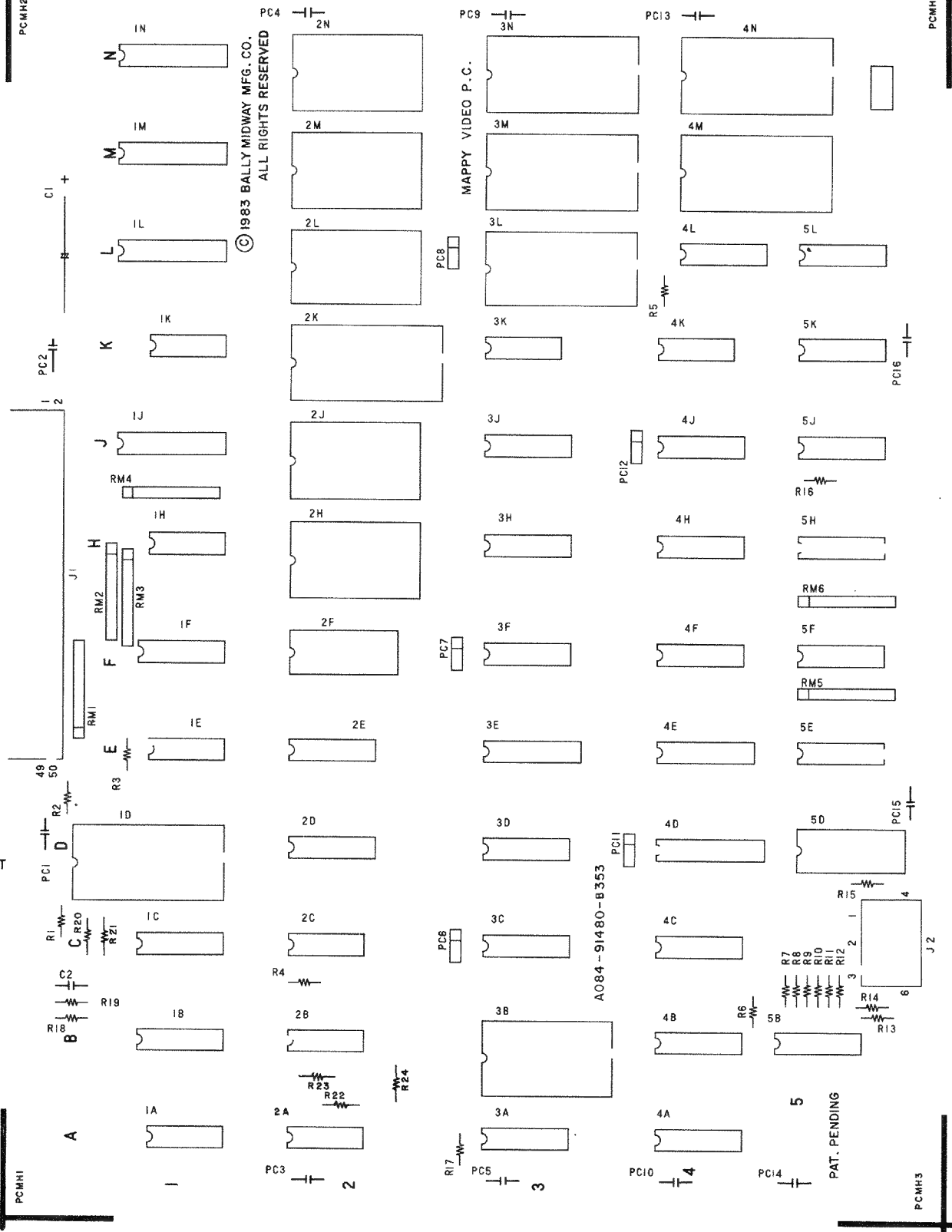
NOTE : THIS PRINT IS VALID FOR
A084-91479-B353 & A084-91479-C353.

PROJECT ENG: J. SZERSZEN		USED ON: MAPPY		REVISIONS	
DO NOT SCALE DIMS		HEAT TREAT	SCALE: FULL	NO. REQ'D: 1 PER	
DIM. TOLERANCE: UNLESS OTHERWISE SPECIFIED		MAT'L	MAPPY CPU ASSY DWG.		
DRAWN: TBB		FINISH	A084-91479-B353		
CHECKED: [Signature]		PART NO:		MO51 - 00353 - 8008	
DATE: 03/02/83					



DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C1	220 MF	IC 1J	74LS245
PC1-PC5	0.1 MF CER.	IC 2J	2KX8 RAM
PC6-PC8	1 MF TANT.	IC 3J,4J	74LS161
PC9,PC10	0.1 MF CER.	IC 5J	74LS157
PC11,PC12	1 MF TANT.		
PC13-PC16	0.1 MF CER.	IC 1K	74LS08
		IC 2K	04XX CUSTOM IC
R1-R7	1K OHM 1/4W 5%	IC 3K	74LS86
R8	470 OHM 1/4W 5%	IC 4K	74LS20
R9	220 OHM 1/4W 5%	IC 5K	BP-ROM MP2-5K
R10	1K OHM 1/4W 5%		
R11	470 OHM 1/4W 5%	IC 1L	74LS245
R12,R13	220 OHM 1/4W 5%	IC 2L	2KX8 RAM
R14	470 OHM 1/4W 5%	IC 3L	12XX CUSTOM IC
R15	100 OHM 1/4W 5%	IC 4L	74LS174
R16,R17	1K OHM 1/4W 5%	IC 5L	74LS378
R20,R21	100 OHM 1/4W 5%		
R22	82 OHM 1/4W 5%	IC 1M	74LS245
R23,R24	100 OHM 1/4W 5%	IC 2M	2KX8 RAM
		IC 3M	2764 EPROM MP1-6
RM1-RM4	2.2 K 9 PIN SIP	IC 4M	11XX CUSTOM IC
RM5, RM6	1 K 9 PIN SIP		
IC 1A	74LS00	IC 1N	74LS245
IC 2A	74LS04	IC 2N	2KX8 RAM
IC 3A,4A	74LS194	IC 3N	2764 EPROM MP1-7
IC 1B	74LS368	ICS 3B	24 PIN IC SOCKET
IC 2B	74LS32	ICS 5B	16 PIN IC SOCKET
IC 3B	2732 EPROM MP1-5	ICS 4C	16 PIN IC SOCKET
IC 4B	74LS158	ICS 1D	28 PIN IC SOCKET
IC 5B	BP-ROM MP2-5B	ICS 5D	20 PIN IC SOCKET
		ICS 3E,4E	18 PIN IC SOCKET
		ICS 2F	20 PIN IC SOCKET
IC 1C	74LS139	ICS 2H	24 PIN IC SOCKET
IC 2C	74LS74	ICS 2J	24 PIN IC SOCKET
IC 3C	74LS174	ICS 2K	28 PIN IC SOCKET
IC 4C	BP-ROM MP2-4C	ICS 5K	16 PIN IC SOCKET
		ICS 2L	24 PIN IC SOCKET
IC 1D	07XX CUSTOM IC	ICS 3L	28 PIN IC SOCKET
IC 2D	74LS258	ICS 2M	24 PIN IC SOCKET
IC 3D	74LS174	ICS 3M,4M	28 PIN IC SOCKET
IC 4D	74LS377	ICS 2N	24 PIN IC SOCKET
IC 5D	PAL 2-5D	ICS 3N	28 PIN IC SOCKET
IC 1E	74LS08	J2	6 PIN AMP CONN.
IC 2E	74LS257	J1	50 PIN CONN. SOCKET
IC 3E,4E	2148 RAM KIT A		
IC 5E	74LS298	PCMHI-PCMH4	P.C. MNTG SCREWS
IC 1F	74LS138		
IC 2F	17XX CUSTOM IC		
IC 3F,4F	74LS161		
IC 5F	74LS365		
IC 1H	74LS32		
IC 2H	2KX8 RAM		
IC 3H,4H	74LS161		
IC 5H	74LS365		

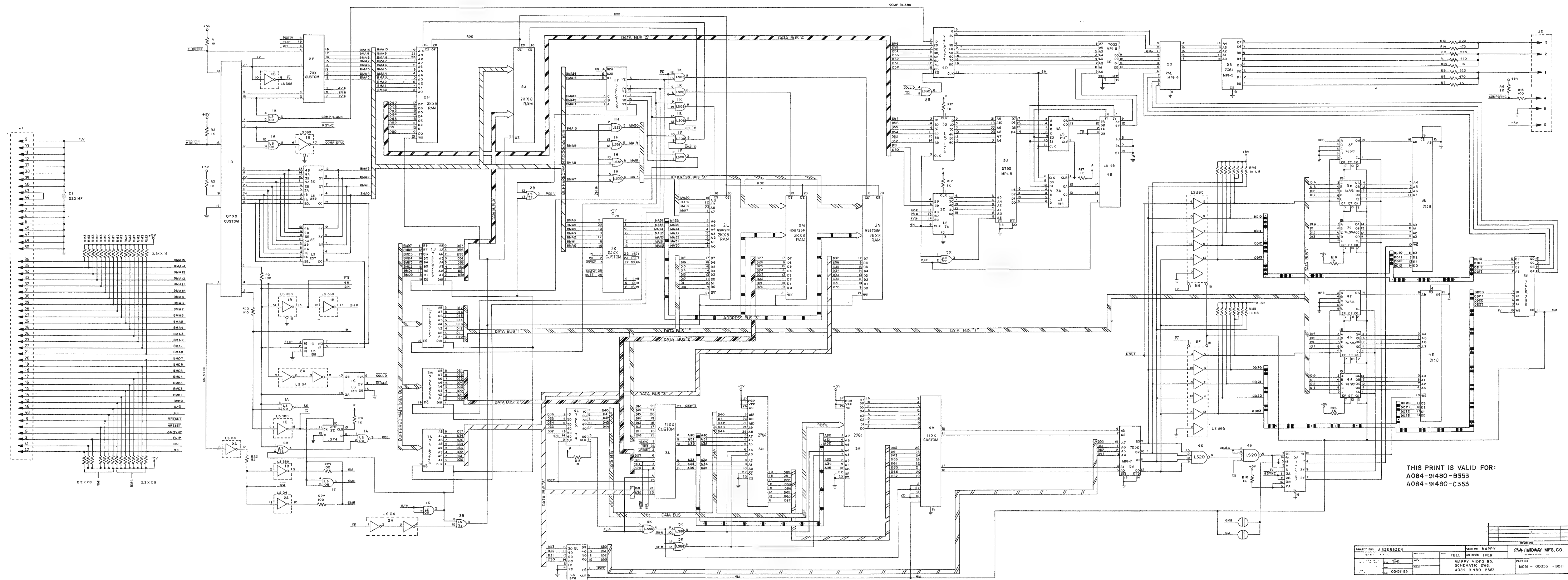


CROSS REFERENCE LIST

DESCRIPTION	QTY	DESIGNATION NO.	PART NOS.
0.1 MF CER	11	PC1-PC5, PC9, PC10, PC13-PC16	0508-00800-0900
220 MF	1	C1	0508-00800-1400
1 MF TANT	5	PC6, PC7, PC8, PC11, PC12	0935-00814-0100
82 OHM 1/4W 5%	1	R22	0062-10483-1XXX
100 OHM 1/4W 5%	5	R15, R20, R21, R23, R24	0062-11083-1XXX
220 OHM 1/4W 5%	3	R9, R12, R13	0062-13383-1XXX
470 OHM 1/4W 5%	3	R8, R11, R14	0062-15683-1XXX
1K OHM 1/4W 5%	10	R1-R7, R10, R16, R17	0062-17983-1XXX
1K 9 PIN SIP	2	RM5, RM6	0508-00804-0200
2.2K 9 PIN SIP	4	RM1-RM4	0508-00804-0300
74LS00	1	IC 1A	0300-00803-0027
74LS04	1	IC 2A	0300-00803-0029
74LS08	2	IC 1E, 1K	0300-00803-0030
74LS20	1	IC 4K	0300-00803-0052
74LS32	2	IC 1H, 2B	0300-00803-0031
74LS74	1	IC 2C	0300-00803-0032
74LS86	1	IC 3K	0300-00803-0054
74LS138	1	IC 1F	0300-00803-0033
74LS139	1	IC 1C	0300-00803-0034
74LS157	1	IC 5J	0300-00803-0050
74LS158	1	IC 4B	0300-00803-0049
74LS161	6	IC 3F, 3H, 3J, 4F, 4H, 4J	0300-00803-0044
74LS174	3	IC 3C, 3D, 4L	0300-00803-0047
74LS194	2	IC 3A, 4A	0333-00803-0003
74LS245	4	IC 1J, 1L, 1M, 1N	0300-00803-0046
74LS257	1	IC 2E	0316-00803-0002
74LS258	1	IC 2D	0353-00803-0013
74LS298	1	IC 5E	0316-00803-0019
74LS365	2	IC 5F, 5H	0316-00803-0020
74LS368	1	IC 1B	0316-00803-0004
74LS377	1	IC 4D	0316-00803-0021
74LS378	1	IC 5L	0316-00803-0018
2148 RAM KIT A	2	IC 3E, 4E	0550-00803-6200
2KX8 RAM	5	IC 2H, 2J, 2L, 2M, 2N	0508-00803-2500
PAL 2-5D	1	IC 5D	0353-00803-0009
BP-ROM MP2-5B	1	IC 5B	0353-00803-0010
BP-ROM MP2-4C	1	IC 4C	0353-00803-0011
BP-ROM MP2-5K	1	IC 5K	0353-00803-0012
2732 EPROM MP1-5	1	IC 3B	0353-00803-0006
2764 EPROM MP1-6	1	IC 3M	0353-00803-0007
2764 EPROM MP1-7	1	IC 3N	0353-00803-0008
04XX CUSTOM IC	1	IC 2K	0066-003CX-XAPX
07XX CUSTOM IC	1	IC 1D	0066-006CX-XAPX
11XX CUSTOM IC	1	IC 4M	0066-018CX-XAPX
12XX CUSTOM IC	1	IC 3L	0066-019CX-XAPX
17XX CUSTOM IC	1	IC 2F	0066-030CX-XAPX
16 PIN IC SOCKET	3	ICS 4C, 5B, 5K	0932-00817-0100
18 PIN IC SOCKET	2	ICS 3E, 4E	0300-00804-0900
20 PIN IC SOCKET	2	ICS 2F, 5D	0550-00804-2300
24 PIN IC SOCKET	6	ICS 2H, 2J, 2L, 2M, 2N, 3B	0508-00804-0500
28 PIN IC SOCKET	6	ICS 1D, 2K, 3L, 3M, 3N, 4M	0508-00804-0400
6 PIN AMP CONN.	1	J2	0017-00021-0424
50 PIN CONN. SCKT	1	J1	0300-00804-1104
MAPPY VIDEO P.C.	1		A080-91480-B353
P.C. MNTG SCREWS	4	PCMHI - PCMH4	0017-00101-0339

THIS PRINT IS VALID FOR:
A084-91480-B353
A084-91480-C353

PROJECT ENG: J. SZERSZEN		USED ON MAPPY		REVISIONS	
DO NOT SCALE DWG.		HEAT TREAT	SCALE	FULL	
DIM TOLERANCES UNLESS SPECIFIED		MAT'L	NO. REQ'D	IPER	
CONCENTRICITY FRACTIONAL		FINISH	MAPPY VIDEO P.C. ASSY DWG.		PART NO.
DECIMAL		A084-91480-B353		M051 - 00353 - B010	
HOLE DIA + .002 .005		DATE 03/16/83			



3-8

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J1

J2

FC2A
FC2B F2

FC2B F2

Q104

C118
JW1

C121
JW2

Q105

C117

U5

R125

R126
R127

R128
R129

VR102

D103

C114

R124

Q102

C111

R105
R106

U2

C106

C107

R133
R114

VR101

FC1A
FC1B

F1

C116

TW3

C113

TW1

C104

TW2

R103

FB1

FB2

HSA1

U1

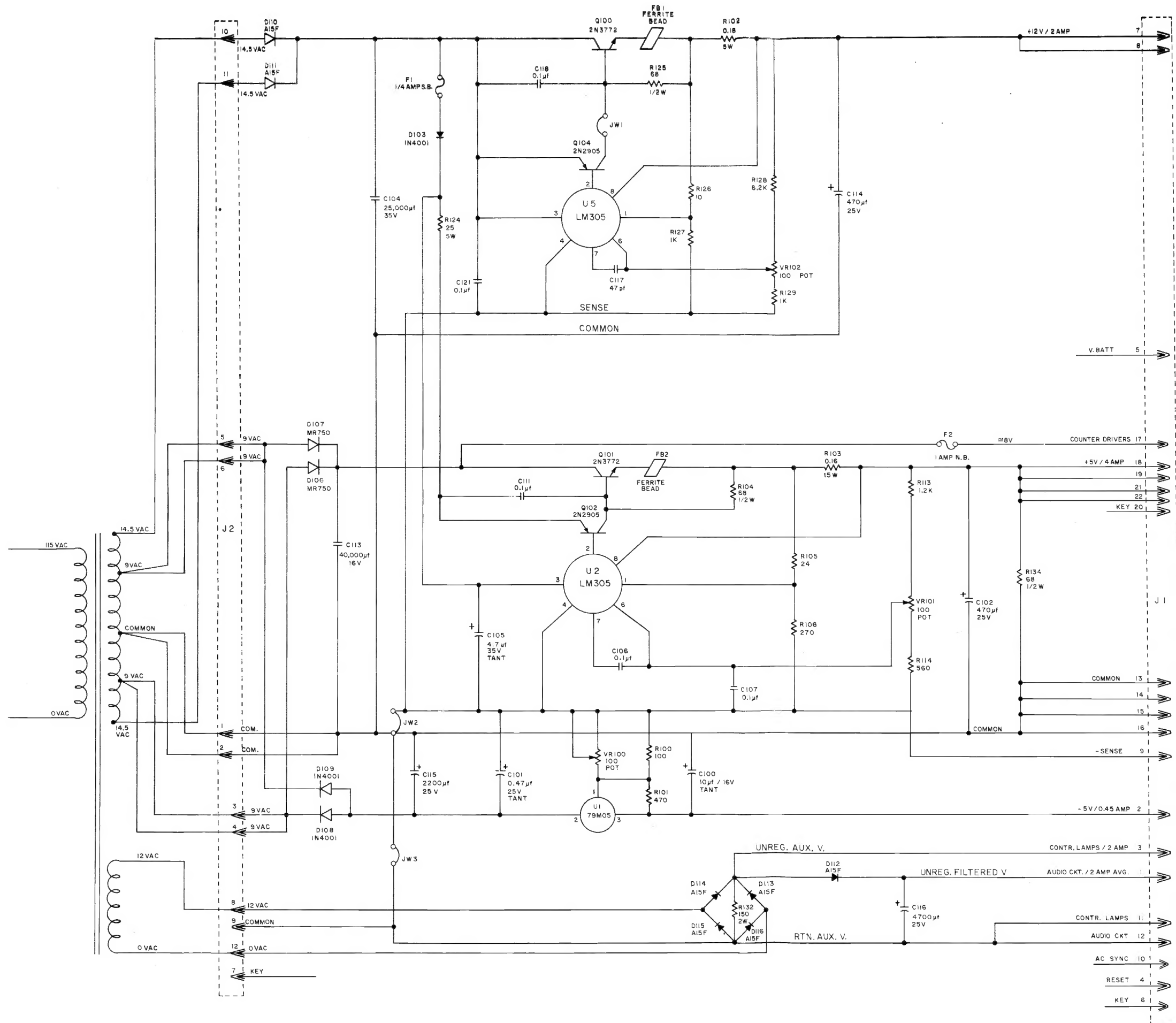
Q100

Q101

MEDIUM POWER SUPPLY 70VA

CROSS REFERENCE LIST

PROJECT ENG				J. JARON		USED ON BLUEPRINT		<div>REVISIONS</div> <table><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>											
DO NOT SCALE DIMS		HEAT TREAT		SCALE		FULL		NO REQ'D PER		<i>Betty</i> / MIDWAY MFG. CO. FRANKLIN PK. ILL.									
DIM. TOLERANCES UNLESS SPECIFIED		MATERIAL		ASSY. DRWG. MED. PS. TO VA (A082-90421-C000) A082-90427-A000				CSD		PART NO.									
CSD		FINISH						CSD		CSD									
DATE		12/2/82								M051 - 00945 - A031									



PROJECT ENG:	REVISIONS		MIDWAY MFG. CO.	
	USED ON	NO REQ	DATE	BY
	NO. OF CHANGES	DATE	DATE	DATE
	DATE	DATE	DATE	DATE
MEDIUM PWR. SUPPLY 70 VA		PART NO. MO51 - 00945 - A032		
A082 - 90421 - C000		DATE 12/02/82		

